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JAUNDICE.¹

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JAUNDICE is a physical sign which imposes on the physician a diagnostic problem of great importance. It is likewise a symptom which distresses the patient and alarms his relatives. It is a smoke screen behind which lurks one of many possible pathological causes, some simple, some serious, some inevitably fatal. At times it makes a brief appearance, like the policeman, after the fight is over; but sometimes it ushers in a train of grave events which proceed slowly or rapidly from bad to worse. Until the physician can see what lies behind the yellow mask, he knows no peace of mind.

History.

When one is consulted by a jaundiced patient, a most careful history must be taken. One notes with interest the family history, the age and occupation of the patient. Those who have reached the cancer age are viewed with more than a modicum of suspicion. So far as occupation is concerned, cane cutters in this country and miners in England have been found prone to attacks of Well's disease. One inquires especially for a history of prolonged alcoholism, of severe dyspepsia, such as one sees in cancer of the stomach. One seeks evidence of dyspnoea, especially the nocturnal paroxysm which occurs in heart failure. Jaundice is not common in heart failure and when present is not pronounced. One never forgets to ask for a history of syphilis, which may be responsible for jaundice, directly as in syphilitic hepatitis or in gumma of the liver and indirectly as the result of arsenical poisoning incidental to treatment. In the latter case, jaundice occurs during the course of treatment. Notwithstanding this, a history of

syphilis may not be forthcoming, in which case one should seek for physical evidence that infections have been made. An inquiry should be made as to the presence of jaundice in other members of the family, the possibility of acholuric jaundice being borne in mind.

Pain in jaundice varies with the cause and is present in varying degrees. In conditions of catarrhal jaundice, congestive heart failure *et cetera*, in which the liver is moderately enlarged, there are but a mild soreness and tenderness in the upper part of the abdomen. The severe pain of gall-stone colic, on the other hand, is fairly characteristic. Some patients experience peculiar difficulty in exactly locating this colicky pain. More often than not it is felt fairly centrally in the upper part of the abdomen and sometimes below the right scapula. It is a true colic, starting suddenly and ending abruptly. It is of agonizing intensity, and when it is associated with vomiting, no relief follows the vomiting. The abrupt termination is fairly typical of gall-stone colic, but is not invariably noticed, for the pain sometimes fades gradually away.

The time relationship of abdominal pain to jaundice is important. In cancer of the stomach pain after meals may have been present for some few months before the onset of jaundice occasioned by metastases in the liver. The pain of colic, on the other hand, commences mostly but a day or so before the jaundice. Of similar importance is the time relation between loss of weight and the appearance of jaundice. All jaundiced patients lose weight after the onset of jaundice, the intensity of the jaundice determining fairly accurately the amount of weight lost. Quite a different clinical picture is that in which loss of weight over a definite period precedes the appearance of jaundice. The gravest view is taken of such a sequence, which suggests malignant disease in the strongest possible terms. The patient should be asked whether drugs have been taken, and whether he has been a victim of insomnia, gout, fibrositis or any other condition likely to warrant the use of "Atophan" or other analgesic remedies.

A history of itching is obtained in jaundice due to obstruction of the outflow of bile from the bile passages. This is generally regarded as due to the retention of bile

¹ Read at a meeting of the Section of Medicine of the New South Wales Branch of the British Medical Association on September 11, 1941.

salts in the blood stream. Frequently it occasions great distress. Fortunately it tends to disappear after a short period in a large proportion of cases. It is interesting to note that it is sometimes complained of for five or six days before icterus makes its appearance.

Finally, one should ascertain the colour of the motions.

Viewed from the angle of history, most cases of jaundice group themselves in the following classes: (i) those associated with severe colic and clay-coloured stools; (ii) those associated with nausea and vomiting of short duration, along with mild epigastric soreness; (iii) those in which the jaundice is symptomless. I am, of course, omitting the physiological icterus of the new-born.

Clinical Examination.

The clinical examination of the jaundiced patient demands meticulous care. One notes the depth of the jaundice, which is always great in biliary obstruction, especially of the common duct. The jaundice due to hæmolytic is of course much fainter. Certain parts of the body are affected early—for example, the sclerotic and the anterior abdominal wall. Indeed, it is difficult to be certain whether a patient is jaundiced at all if the sclerotic is not affected. Frequently irritative lesions of the skin are present, and rarely petechiae. It is remarkable that when patients with congestive heart failure become jaundiced, oedematous areas show no icterus. The size of the liver is determined by clinical methods and, if possible, by radiological methods. The area of liver dullness is diminished in acute yellow atrophy sometimes to such an extent that resonance is obtained on percussion for a distance of two inches above the costal margin. One needs to be very accurate to determine this, for it is notoriously easier to be sure of an enlarged than of a reduced area of liver dullness.

In most of those milder cases of hepatitis designated catarrhal jaundice, the liver is enlarged slightly, extending one inch below the costal margin in an average case. The skin is tender over the liver, and pain is felt when the liver edge is palpated. The liver edge is felt to be sharp and not thickened. Large livers are found in cirrhosis of only moderate duration, particularly Hanot's biliary cirrhosis, a type which occurs in the young. The edge of these livers is hard and somewhat rounded. An enlarged, hard liver is also found in chronic venous congestion of long standing—the so-called "nutmeg" liver—as in the later stage of mitral stenosis. In cardiac disease the diagnosis of the cause of jaundice is rarely difficult.

An exception was the case of a middle-aged male patient who was recently under my care at the Royal Prince Alfred Hospital. He had an enlarged hard liver, ascites and oedema of the feet. There was a slight dilatation of the superficial veins in the left hypochondriac region. He was short-winded and cyanosed. Slight icterus was present. There was no clinical sign of valvular disease of the heart, but the heart was enlarged, its rate was increased and its rhythm was regular. Although malignant disease of the liver was considered as possibly the correct diagnosis, it was finally rejected in favour of congestive heart failure. The post-mortem examination showed that both pathological conditions were present. The heart had failed because of metastatic malignant deposits in the heart muscle. One large deposit had encroached upon the lumen of the left ventricle and the atrio-ventricular valve was almost closed by it.

The presence of ascites along with an enlarged liver mostly points towards portal cirrhosis as the cause of any jaundice which may be present. The combination may occur in heart failure, malignant disease or tuberculosis. Examination of the spleen of jaundiced patients is important. One may find an enlarged and somewhat soft spleen in cirrhosis. In acholic jaundice, and in other blood disorders which may be complicated by hæmolytic jaundice, the spleen is large and hard, its edge is rounded and its notch is felt distinctly as a deep depression with rounded hard edges. In chronic heart disease also, if the spleen is enlarged at all, it is mostly indurated, like the liver, of the "nutmeg" variety.

Having paid careful attention to the abdomen and made an examination *per rectum*, the clinician should look for enlargement of the lymph glands, and next should devote his attention to a complete examination of the blood. The

romantic history of our knowledge of the nature of jaundice is bound up in the evolution of our capacity to detect bilirubin in minute quantities in the blood. Writers of modern text-books love to tell the story of how, in the time of Virchow, jaundice was regarded as being produced either in the liver (the hepatogenous variety) or in the blood stream and tissues (the anhepatogenous variety). The story goes on to relate how the truth was obscured for many years by the work of Minkowski and Naunyn—beautifully executed, but incorrectly interpreted. Following their experimental removal of the liver from geese, these workers considered that all jaundice arose from diseases of the liver. The true light commenced to shine on this subject in the second decade of this century. MacNee has provided us with an excellent review of the experimental work upon which our modern views of jaundice are based. He has described the importance of Van den Bergh's work and his tests for bilirubinæmia, and has thus detailed how the conception arose that bilirubin was formed in the cells of the reticulo-endothelial system, and not in the liver cells. Actually it is carried by the blood stream to the liver cells and by them transmitted to the bile passages. Mann has shown that more bilirubin is formed in bone marrow than in any other tissue. In the light of this new knowledge, MacNee recommended that jaundice should be classified into the following groups: (i) obstructive jaundice, (ii) toxic and infective hepatic jaundice, and (iii) hæmolytic jaundice.

In obstructive jaundice the icterus is due to the accumulation in the blood of bilirubin which has previously passed through the liver cells, but which, having met with obstruction in the bile passages, had found its way back into circulating blood. This bilirubin gives a prompt direct colour change when tested by Van den Bergh's method.

In hæmolytic jaundice, on the other hand, the icterus is caused by an excess of bilirubin which has not been transmitted by the liver cells to the bile passages, presumably because its very excessive concentration has been too much for the liver cells. This bilirubin does not provide a prompt, but rather a delayed, colour change in Van den Bergh's tests. Therefore it is regarded as being somewhat different from the bilirubin of obstructive jaundice. Moreover, these two types of bilirubin differ in their excretion by the kidney, the renal threshold for the bilirubin of obstructive jaundice being considerably lower than that of hæmolytic jaundice.

In toxic and hepatic jaundice both types of bilirubin are found in the blood. These two types of bilirubin are spoken of as cholebilirubin and hæmobilirubin, the former being found in the bile from the gall-bladder and giving a direct reaction to Van den Bergh's test, the latter being found in the blood in hæmolytic jaundice and giving an indirect or delayed direct reaction to Van den Bergh's test. It must be noted that there is no clear proof that these substances are chemically dissimilar. It is generally believed that hæmobilirubin is a bilirubin bound to protein of the blood serum. It is further suggested that in its passage through the liver cells this union with protein is broken down. This union of bilirubin with protein in hæmobilirubin probably explains why it is excreted by the kidney with more difficulty than cholebilirubin.

Van den Bergh has found that normal blood serum contains from 1 in 1,000,000 to 1 in 400,000 parts of bilirubin, or, in other words, from 0.2 to 0.5 of a unit if the concentration of 1 in 200,000 is taken as a unit. When four units of bilirubin are present in the blood, bile pigment appears in the urine. In obstruction small increases in the blood concentration of bilirubin not reaching four units represent instances of latent obstructive jaundice—a condition which was not recognized before Van den Bergh published his results.

For patients with recognizable jaundice the Van den Bergh test is seldom of critical value in diagnosis. The distinction between a true obstructive and a hæmolytic jaundice is never in doubt for long. The simple fact that bile pigment appears in the urine in recognizable jaundice due to obstruction, and probably never in hæmolytic jaundice uncomplicated by biliary obstruction, is sufficient in itself to enable clinicians to dispense with the Van den

Bergh test for diagnostic purposes. As a quantitative measure of the progress of a case of jaundice the test has great value. But even for this purpose Boyd prefers to use the icterus index. Other changes found in the blood in obstructive jaundice may be conveniently referred to here. Surgeons have been aware of a tendency to dangerous hæmorrhage after operation upon jaundiced patients. Both the bleeding time and the clotting time have been found prolonged in certain cases, and the retractability of the clot has also been found defective. Whipple and Britton consider the tendency to bleed as probably due to defective fibrinogen, although they admit that there may be a defect in the formation of prothrombin in the blood. Mellanby's recent work points to deficiency in prothrombin and indicates that the giving of vitamin K and bile relieves the prothrombin deficiency. Whipple and Britton point out that the calcium level of the blood is normal in jaundice. Anaemia, both macrocytic and microcytic, has been reported in jaundice; it is probably not due to the jaundice, but to the parent cause of the illness. In obstructive jaundice all the contents of the bile are retained in the blood—namely, the bile pigments, bile salts and cholesterol. The bile salts, sodium taurocholate, desoxytaurocholate of sodium, and glycocholate and desoxyglycocholate of sodium, are regarded as responsible for the toxic symptoms of cholæmia. They alter the surface tension of cell membranes and derange cell metabolism. The well-known symptoms of itching and bradycardia, along with the pronounced nervous systems seen in the more severe instances of icterus, are due to the toxic action of bile salts. Cholesterol is increased in the blood and examples of xanthomata have been seen in jaundiced patients. The urine contains bile in obstructive jaundice, but possibly not in true hæmolytic jaundice. Certainly there is no biliruria in acholuric jaundice. There is an increase of urobilin in the urine of patients suffering from pernicious anaemia and other types of hæmolytic jaundice. Its excretion in the urine is increased in catarrhal jaundice, and sometimes in cirrhosis, before biliruria appears. Thus it is a more delicate sign of liver disease than is biliruria.

I have now traced the clinician's problem in history taking and in the physical examination of jaundiced patients. Let us now consider briefly a few of the common types of jaundice treated by the physician.

Acute Yellow Atrophy of the Liver.

The most dreaded of the hepatic disorders is that designated acute yellow atrophy. Fortunately it is as rare as it is formidable. Since 1912 only 15 patients with this disease have been admitted to the Royal Prince Alfred Hospital. Two were aged twenty years, five were aged under twenty years, the oldest was aged fifty years. Twelve died in hospital, two were discharged unrelieved, and one recovered. Post-mortem examinations were made upon nine of the twelve who died, and typical findings of acute yellow atrophy were recorded.

The one patient with this disease who recovered was a female, aged eighteen years, who had been pregnant for four months on her admission to hospital. She stated that she had been vomiting for six weeks and jaundiced for three weeks. The area of liver dullness was diminished, the percussion note being resonant for a distance of two inches above the costal margin. She recovered quickly after her pregnancy had been terminated.

Doubtless this was one of the subacute forms of yellow atrophy, examples of which have been recorded in medical literature.

Vomiting was a fairly constant symptom in all the histories.

The youngest patient was a boy, aged thirteen years, who died on the day of his admission to hospital. He had suffered from anorexia and jaundice for two weeks, from drowsiness for a few days and from coma for one day. His liver was larger than usual, being 1,340 grammes in weight; but the atrophy was so pronounced in the yellow patches that the lobular structure could not be recognized.

A typical history is that the patient complains of anorexia, nausea and vomiting for a few weeks. After an interval, jaundice sets in. At first the seriousness of the

condition may not be recognized. The stools may be clay coloured. The Van den Bergh test often produces a prompt direct or a biphasic reaction. The urine contains bile and sometimes leucine and tyrosine crystals. Soon serious nervous symptoms develop, the patient becomes drowsy and mentally peculiar and, before death, comatose.

It has been recognized for long that great reduction in the size of the liver can be recognized clinically in these cases. In some, however, the liver is enlarged, at least when the patient is first admitted to hospital. Possibly preexisting disease of the liver accounts for this enlargement, and not the toxæmia which finally overwhelms the patient. The pathological changes in the liver found *post mortem* are too well known to warrant description here.

The term "subacute yellow atrophy" has been applied to diseases of the same type as acute yellow atrophy associated with a longer history, less severe symptoms and an occasional favourable termination. It is well known that the liver has the capacity of regeneration; and most morbid anatomists who write upon this subject appear to regard multiple nodular hyperplasia of the liver as an end-result of healed subacute yellow atrophy.

The cause of acute yellow atrophy is not known in many cases. Sometimes the administration of "Atophan" has preceded its onset. In one of the 15 cases in the Royal Prince Alfred Hospital records (in which the patient was under the care of Dr. S. A. Smith) the drug "Tetraphan" was held responsible for the patient's disease and death.

Before I dismiss this subject, it is noteworthy that a direct positive Van den Bergh reaction may be obtained with the serum in acute yellow atrophy. There is of course no true obstruction of the biliary passages to account for such a finding. MacLagan considers that if his theory is correct, a prompt direct Van den Bergh reaction is yielded only by bilirubin which has first passed from the blood stream through the liver cells; then atrophy of the liver cells must have allowed this altered bilirubin to return from the bile passages to the circulating blood. This no doubt is one reason why MacLagan states that the Van den Bergh test cannot be relied upon to distinguish between obstructive and non-obstructive jaundice.

Toxic Hepatitis.

Toxic hepatitis may complicate any severe infection—for example, typhoid fever or septicæmia. It may also follow malaria.

The toxic hepatitis in these cases does not present any special features, the overwhelming parental infection dominating the clinical picture. Severe hepatitis is also a complication of poisoning by chloroform, carbon tetrachloride, trinitrotoluene, tetrachlorethane and arsenical compounds. The organic arsenicals in use today have a safe curative ratio. Such instances of toxic hepatitis and jaundice as we see now among syphilitics treated by arsenicals are fairly mild, and the patients soon recover after treatment.

The hepatitis of eclampsia is another example of toxic hepatitis which results in necrotic lesions. Well's disease, well known in north Queensland, is due to infection with the *Spirochæta Ictero-hæmorrhagica*.

Catarrhal Jaundice.

The mildest types of toxic hepatitis are the commonest, and come under the heading of catarrhal jaundice—a disease concerning which I propose to pause for a few moments of discussion. Since 1921, 140 patients have been discharged from the Royal Prince Alfred Hospital with a final diagnosis of catarrhal jaundice. I have studied the histories of these patients and have been struck with the variety of symptoms from which they have suffered. In some the jaundice appeared without any other symptoms. In the vast majority gastro-intestinal symptoms appeared at some stage of the illness, mostly early, preceding the onset of jaundice by a short time. Some had been subject to bilious attacks throughout life, the attack preceding the development of icterus differing from preceding attacks only in severity. The commonest gastro-intestinal symptoms were nausea and vomiting, with or without fever. Other initial symptoms were headache, dyspnoea, "pain all

over", pain in the joints, stiffness in the joints, shivers, an attack of influenza, abdominal pain and a sense of heaviness in the epigastrium. It was noted that in children the symptoms were mostly mild and the duration of the jaundice was short. The physical signs and results of investigations differed in no particular from what is generally known of this condition. The Van den Bergh test was mostly found to produce a biphasic result. There were, however, some immediate direct results.

A consideration of these histories leads to the conclusion that not one but possibly many different kinds of toxic hepatitis are grouped together as catarrhal jaundice. Those which commence with dyspepsia are probably instances of gastro-intestinal inflammation involving the bile passages, and through them the liver. This organ was frequently found to be large and tender. Those which commence with influenza point to a metastatic infection spreading from the upper respiratory tract. The patients who had initial stiffness or pain in the joints were probably suffering from a blood-borne infection. Those who had headache, nausea and vomiting were possibly suffering from an initial primary hepatitis, due to a chemical or bacterial toxin. In a few instances pain in the right hypochondrium was so severe that laparotomy was performed. The gall-bladder, however, appeared normal in all, and the bile passages were not obstructed by calculi. Most of these patients suffered from their initial symptoms for about a week under observation, and then their condition gradually improved. The motions were sometimes clay coloured for a few days, and sometimes were light yellow. This colour soon returned to normal; the liver, if it had been enlarged, gradually became reduced in size; fever, if it had been present, soon abated. In short, the illness was of a mild character. This, of course, is consistent with the experience of most physicians. The only treatment required was rest in bed, the administration of mild aperients and a restricted diet poor in fat. In fact, unless the stools are clay coloured there is no need to restrict fats in the diets of patients who are not nauseated, and experience proves that many patients can cope with a moderately full diet.

It would appear from the foregoing remarks, however, that the term "catarrhal jaundice" falls far short of our requirements. It is useful clinically to denote a mild type of hepatitis with jaundice. McNee's class of infectious and toxic hepatitis with jaundice would cover all these lesions; but it also includes others more severe, such as acute yellow atrophy of the liver. Perhaps it would be better to use the term "benign toxic hepatitis" instead of "catarrhal jaundice". The former term has the advantage of including all of the milder types of illness associated with slight enlargement of the liver and jaundice of short duration. It would also serve as a contrast to *icterus gravis* or virulent toxic hepatitis. It is true that some pathologists believe that cirrhosis of the liver may conceivably follow upon catarrhal jaundice. Moreover, Eppinger has indicated that catarrhal jaundice is but acute yellow atrophy in miniature, because the disease processes are the same in the two conditions; the only difference is that the one toxin touches the liver cells lightly whilst the other destroys them. There is all the more reason, therefore, for using such an expression as I suggest, namely, "benign toxic hepatitis", in place of catarrhal jaundice.

Infective Cholangitis.

Ascending infective cholangitis is a disease of unknown origin. It is presumably a bacterial infection, which often assumes grave proportions. It may be acute or chronic in its clinical manifestations. The acute form characteristically consists of a febrile disturbance in which the temperature is of a septic type, punctuated by exacerbations of higher temperature with rigors. The liver may become very enlarged and indurated, and the jaundice is deep. It may persist for months. Often enough this infection is associated with gall-stones, and unless it can be relieved by some positive surgical procedure, the outlook is serious, for the patient is subject to all the consequences of profound and prolonged cholemia, as well as to the possibility of hepatic failure.

Acholic Jaundice.

Time will not permit full discussion of the various blood diseases associated with hæmolytic jaundice. Most of them present no special difficulties in diagnosis, a consideration of the blood picture telling the whole story. Acholic jaundice is an occasional exception, for now and again, if the patient is seen during the stage of hæmolytic crisis, the diagnosis may for a time be in doubt. One notes, of course, that there is jaundice without billiuria. Although there is no bilirubin in the urine, there is a great increase of urobilin. In the familial form the history sets one on the right track. The differential diagnosis depends upon the increased number of circulating reticulocytes and the increased fragility of the red cells. The reticulocytes in an average case number about 20% of the circulating red cells. The red cells exhibit spherocytosis and are hæmolyzed much more readily than normal red cells. They may begin to be hæmolyzed in 0.75% normal saline solution, whereas healthy red cells commence to be hæmolyzed at 0.4% normal saline solution.

Progress in acholic jaundice must be carefully estimated, because the operation of splenectomy—the only cure—need not always be undertaken. Many patients with the familial type of this disease lead a useful life and display but a moderate degree of anæmia. In the acquired form of the disease the anæmia may be more severe and the prognosis is generally regarded as more grave. From the point of view of diagnosis there are no essential distinctions between the acquired and the congenital forms of acholic jaundice, although spherocytosis is not so notable in the former. It is recommended, however, that the operation of splenectomy should not be deferred in the acquired form of this disease. Acholic jaundice is frequently associated with the presence of gall-stones. These stones contain no cholesterol, but are precipitated by the excess of bilirubin which is naturally presented to the liver for excretion.

Impacted Gall-Stones.

I have not dealt with any of the more frankly surgical conditions that cause jaundice, as they seldom come into a physician's practice. Impacted gall-stones produce such definite signs and symptoms apart from obstructive jaundice that mostly the correct diagnosis is easily arrived at. Unfortunately there are exceptions, as in the case of a middle-aged male whom I recently saw.

The patient had developed jaundice with a minimum of abdominal discomfort. The jaundice deepened and his liver became large and hard. Months went by and he wavered to an alarming extent. Malignant disease appeared to be almost certainly present. But he eventually became completely well and stated that he passed two large gall-stones *per rectum*.

Discussion.

In jaundice the main problem which confronts the physician is to diagnose the morbid process responsible. Having excluded surgical disease, the physician is next troubled by the necessity of formulating a prognosis. This largely depends upon the extent of the damage done to the liver. Tests of liver efficiency are available for one's assistance, but they have not found universal favour. The reason is that the liver has many functions, and any single test must be applied to a single function. The Van den Bergh test, for instance, is directed towards the excretion of bile pigment. It can determine the depth of bilirubin retention quantitatively and can measure improvement (or the reverse) in the patient's condition. In the latter connexion it can only confirm clinical findings. The depth of jaundice has little bearing upon prognosis, so that one can say that the Van den Bergh test does not help in prognosis.

The levulose tolerance test and the galactose tolerance test each have their exponents. They test the glycogenic function of the liver. It is well known that tests of the deaminating function of the liver are of no value in prognosis. Witts has shown that the amino-acids are not increased in the blood in liver disease until near the end of a fatal case. The hippuric acid test deals with the detoxicating function of the liver.

MacLagan last year wrote of his modification of the galactose tolerance test and coined the term "galactose index" for the sum of the four blood galactose values in milligrammes per 100 cubic centimetres at half an hour, one hour, one and a half hours and two hours after an oral dose of 40 grammes of galactose. He noted impairment of function in toxic jaundice and hyperthyroidism.

Hepatic function tests have been criticized on the following grounds. First, the liver may be deficient in one function and not in others. Secondly, some of the tests employed depend for their efficiency upon a normal rate of absorption from the intestines, which cannot be assumed. Thirdly, the liver is said to have such remarkable functional efficiency, even when diseased, that its reserve power will allow it to function normally in answer to tests unless the patient is moribund. I have the feeling that, as in most new procedures, hostile criticism of liver function tests is justified only from those who have had practical experience of them. At present the material available is insufficient to allow a final judgement upon the value of liver efficiency tests in prognosis. The need for such tests is apparent, for patients who die of acute yellow atrophy are sometimes regarded as having catarrhal jaundice until they enter upon their final decline. In eclampsia also a reliable quantitative estimate of liver damage would be of untold value.

Conclusion.

I have discussed jaundice somewhat discursively from the point of view of a physician. I have endeavoured to demonstrate that this is one disease or symptom which places the clinician upon his mettle. Unaided by laboratory tests, and relying upon his knowledge of morbid processes, he is compelled in jaundice to use his clinical acumen both in diagnosis and in prognosis. If he frequently fails, he may be excused, because the problem is fraught with the greatest difficulties. I am confident that the laboratory will yet come to our assistance.

CARCINOMA OF THE COLON.

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The colon is a bifunctional organ and anatomically and embryologically is twofold; it consists of the proximal portion and the distal portion. The proximal portion runs from the ileo-caecal valve to the middle of the transverse colon (midgut) and the distal portion runs from this point to the recto-sigmoid junction.

The transverse colon is really a link between the proximal and the distal portions. On the hepatic side it is the proximal portion, merging into the distal portion on the splenic side.

The functional differences between these two portions of the colon may be summed up as follows. The function of the proximal portion is that of absorption, and that of the distal portion is storage. The contents of the former are fluid, becoming semi-liquid the further one goes from the right side of the colon and finally becoming solid in the left side of the colon. Bacteria are numerous in the proximal portion, and fewer are present in the distal portion. Peristalsis is active in the former, less active in the latter. Absorption is free in the proximal portion, which is richly supplied with lymphatics. In the distal portion there are fewer lymphatics and absorption is less.

Pathology.

Carcinoma of the proximal portion of the colon grows fairly rapidly and produces pain because of the interference with peristalsis. It is prone to ulceration by reason of its type, and hence gives rise to hæmorrhage causing anaemia. Toxæmia may be an important feature, owing to the absorption of products of degeneration. Intestinal obstruction is seldom seen. Carcinoma of the distal

portion of the colon is of a slower rate of growth; it ulcerates less readily and may precipitate intestinal obstruction.

Macroscopically there are four main types of carcinoma:

1. The *adenoma destruens* is a large, bulky growth of the proximal portion of the colon, projecting into the lumen, ulcerating early and attaching itself to neighbouring viscera with fistula formation. This is microscopically an adenocarcinoma and may be encephaloid in structure.

2. The stenosing fibrocarcinoma initially commences as a superficial ulcer, and its characteristic feature is a pronounced induration with surrounding fibrosis leading to an annular stricture. When sclerosis is pronounced the bowel may be extremely shortened. Neighbouring viscera are soon involved, and it gives rise to early metastases in regional lymph nodes.

3. The gelatinous adenocarcinoma is a bulky tumour spreading over a long length of colon. It ulcerates early and causes severe ulceration of the lumen of the bowel, which becomes a rigid tube.

4. Adenocarcinoma may develop in a solitary polypus. Polypi may become carcinomatous at the base, stalk or apex.

Of these four types, the most malignant is the colloid carcinoma, and the *adenoma destruens* is the least malignant. The development of *carcinoma coli* is slow, and invasion of the lymph nodes is delayed for some time. General metastases rarely occur early. The order of frequency is as follows: the pelvic colon, the caecum and ascending colon, the transverse colon, the flexures, and lastly the descending colon.

Clinical Features.

The signs and symptoms of colonic carcinoma vary according to the site in the colon, the type of lesion and the presence or absence of complications.

General Symptoms.

The onset is usually insidious. Of patients with *carcinoma coli*, 95% complain of a change in bowel habit; for example, chronic diarrhoea may occur. Increasing constipation of recent origin in an elderly patient may suggest neoplasm. Borborygmi may be another early symptom due to commencing stenosis of the bowel. The colon proximal to the growth may be dilated and early peristalsis may be seen. There may be a derangement in the physiology of the stomach, such as anorexia, especially if the neoplasm is in the distal portion of the colon. Abdominal pain is seldom experienced at the site of the neoplasm. In cancer of the proximal portion of the colon pain is usually in the epigastrium and may simulate peptic ulcer. In the distal portion of the colon pain is due to intestinal obstruction and is usually hypogastric in position. Hæmorrhage *per rectum*, either occult or frank, is an early symptom of carcinoma of the left half of the colon, and is due to ulceration. If the blood is bright red, it comes from somewhere below the splenic flexure.

Symptomatology Applicable to the Right Side of the Colon.

Patients may present themselves with the following typical clinical picture: (i) Mild dyspepsia with few localizing symptoms, simulating chronic appendicitis or cholecystitis. (This type represents a high percentage of latent unsuspected cases of carcinoma of the proximal portion of the colon.) (ii) The accidental discovery of a tumour. (iii) Profound anaemia, loss of weight and debility (to be distinguished from those due to gastric carcinoma and pernicious anaemia).

Symptomatology Referable to Carcinoma of the Distal Portion of the Colon.

In carcinoma of the distal portion of the colon there may be symptoms of intestinal obstruction, either acute obstruction or gradual obstruction becoming acute. Progressive constipation is present. Intestinal obstruction is six times as common in the distal portion of the colon as in the proximal portion.

In carcinoma of the descending or pelvic colon a fixed or mobile tumour may be palpable in the left iliac fossa. The whole colon may be distended, especially the caecum. Ballooning of the rectum may be present.

In cancer of the splenic flexure there are certain special difficulties due to its situation. It is high up under the costal margin and is fixed to the diaphragm. The colon forms an acute angle here, and the contents are solid. Consequently acute or gradual obstruction is apt to occur. The neoplasm tends to perforate here, forming a pericolic abscess. Another symptom is abdominal pain, worse just before defaecation.

Complications of Carcinoma of the Colon.

The following complications may occur: (i) chronic intestinal obstruction, which may become acute; (ii) perforation, either through the tumour or just proximal to it, through a stercoral ulcer, causing local or general peritonitis; (iii) internal fistulous communication with bladder, small intestine or stomach.

Diagnosis.

A careful history and physical examination are required. A rectal examination will exclude rectal carcinoma and a sigmoidoscopic examination will exclude recto-sigmoid carcinoma. X-ray examination after a barium enema will usually reveal carcinoma of the left side of the colon; but a "follow-through" meal may be necessary to reveal the carcinoma of the caecum or ascending colon. A barium enema should be used first, as a meal may cause obstruction. Radiologically the pathognomonic feature of cancer of the colon is a constant irregular filling defect or an annular defect. All defects have characteristic ragged, jagged, rough contours, with canalization of the bowel lumen. The contrast enema is a valuable method of investigation. The standard barium enema is partly evacuated and air is introduced into the colon. A thin lining of barium is thus obtained, and the edges of the colon are seen as two clear lines, any filling defect being readily obvious. However, if the X-ray examination reveals no lesion, but the clinical signs arouse suspicion, one should perform laparotomy to confirm or disprove one's idea.

Differential Diagnosis.

In the differential diagnosis, with regard to the right half of the colon we must consider hypertrophic or ileocaecal tuberculosis, chronic or retrocaecal appendicitis and actinomycosis.

Both hypertrophic tuberculosis and actinomycosis have a predilection for the caecum and ascending colon. Actinomycosis is usually associated with severe secondary anaemia, whilst fever due to secondary infection is common. Single or multiple sinuses may occur if the disease is of long duration, and these discharge the typical sulphur granules, sometimes difficult to find. Actinomycosis is usually fixed to the anterior abdominal wall, whereas carcinoma first fixes itself to the posterior abdominal wall.

Hypertrophic tuberculosis occurs in younger people, and there may be evidence of tuberculosis elsewhere. The disease is chronic, with little cachexia or loss of weight. Obstruction in this region is more commonly due to the fibrosing effects of tuberculosis than to cancer.

Radiologically it may be difficult to differentiate from cancer.

There are two ways in which diseases of the appendix may simulate cancer of the caecum. A much thickened retrocaecal appendix fixed to the caecum and posterior abdominal wall may feel just like a carcinoma on palpation. An acute appendiceal abscess is easy to distinguish, but there is a type of abscess of insidious onset, of which the chief symptoms are malaise and constipation with the presence of a tumour.

On the left side of the colon the chief disease to differentiate is a localized area of diverticulitis, which usually occurs in well-nourished people. Radiological examination is the chief means, and the typical picture of diverticulitis is seen.

Treatment.

The treatment of carcinoma of the colon is not yet standardized, different workers using different methods; but on close analysis all the methods now used are seen to agree in basic principles. All are agreed that the large bowel is dangerous material to work on by virtue of its deficient blood supply, its lack of mesentery in certain portions (areas being left without a serous coating), its lack of mobility from the same cause, and its highly infective contents, so that death from infective peritonitis due to a break-down of the suture line was common until recent years.

In this, more than in any other surgical disease, do we realize that each patient needs special individual thought, because practically no case of carcinoma of the colon is the same as any other. Not only must we deal with the tumour itself, but we must think of the general condition of the patient, the situation and attachment of the growth, lymphatic involvement or the presence of distant metastasis. In addition to this, especially on the left side of the colon, is the all-important question of the presence or absence of obstruction, either acute or chronic.

Certain general statements are applicable to every case of carcinoma of the colon. Let us take a case of uncomplicated carcinoma of the colon, on either the right or the left side. The patient is kept in bed for a week or ten days and given bowel washouts every day (saline solution is as good as anything); he receives a non-residue diet with plenty of glucose. If the haemoglobin value is below 65%, a blood transfusion, repeated if necessary, is given to raise the haemoglobin percentage above 65. A full investigation of renal function is imperative, as it may reveal signs of latent uraemia which would vitiate the operation.

Operation.

In most of these operations the patient may lose up to two litres of fluid; therefore a continuous intravenous administration of saline solution should be kept up during the operation. This applies especially in obstructive carcinoma.

Spinal anaesthesia is the best. The many advantages of spinal anaesthesia assisted by ephedrine to combat any fall in blood pressure, especially in the presence of obstruction and distension, are too well known to need recapitulation; but its greatest advantage is that it is a quiet anaesthetic, so that pushing coils of bowel do not cripple the action of the operator. The relaxation of the abdominal musculature enables better visualization of the field of operation.

The incision used will vary with the situation of the tumour; but one will always obtain sufficient exposure from a paramedian incision, which can be extended either distally or proximally without injury to muscle.

When an opening is made into the abdomen there are certain fundamental rules to observe. Careful exploration of the abdomen should be carried out in the following way. The liver is first palpated, next the aortic lymph nodes and nodes of mesentery are investigated and then the pelvis is examined. The growth is palpated last, because it is infective. The growth should never be handled first, as pus may be released or the gloves infected, and then if the liver is palpated after this a subphrenic abscess or peritonitis will result. The position and attachments of the growth are examined. Attachment to the anterior abdominal wall is not a contraindication to removal. It is those cases in which the growth invades small bowel, uterus or stomach, that the mortality rate rises rapidly.

In cancer of the right side of the colon the operation to perform is a right hemicolectomy including the last six inches of the ileum and the right half of the transverse colon. If there is no gross obstruction, and such is rare in these cases, one should perform the operation in one stage with an aseptic end-to-side ileo-transverse colostomy, using Rankin's three-bladed clamp. The term "aseptic anastomosis" means the use of one or more layers of interrupted seromuscular sutures alone, the mucous membrane being untouched. The best anastomosis is end of ileum to side of transverse colon, as this leaves only one blind end, the transverse colon. This is closed by a purse-

string suture after being crushed and oversewn. The ends of the purse-string are left long to bring the blind end to the parietal wound, so that any leakage will tend to come through the wound itself. Some authorities have advocated an ileostomy proximal to the anastomosis; but this increases the risk of peritonitis, and severe infection of the wound or a permanent faecal fistula may result.

Two-stage operations, the first being an ileo-transverse colostomy, are to be avoided if possible, because on opening the abdomen for the second stage one often finds massive adhesions present which prohibit further operation.

However, in the presence of obstruction, one must perform a first stage of anastomosis between the terminal part of the ileum and the transverse colon, leaving plenty of room to perform the resection later.

In the case of an inoperable carcinoma of the right side of the colon an ileo-transverse colostomy is the operation of choice.

In cases of carcinoma of the left side of the colon there is no doubt that the graded operations are the best, such as the obstructive resection type of Mickulicz-Paul operation.

The Mickulicz-Paul operation consists of the following stages: (i) exteriorization of the loop of diseased bowel; (ii) formation of a double-barrelled colostomy; (iii) elimination of the spur to reestablish the continuity of the bowel; (iv) an operation for closure of the colostomy.

Exteriorization of the transverse colon and sigmoid colon is facilitated by the presence of the mesenteries, so that they are already mobilized. However, other sections of the colon require mobilization by incision of the parietal peritoneum on the lateral side of the bowel wall. Enough bowel should be mobilized to free the tumour and approximate the limbs of the loop for a distance of three inches to form the spur.

Following mobilization the limits of resection of the bowel may be shown by the insertion of non-penetrating sutures on the mesenteric and anti-mesenteric borders of the bowel. These sutures clearly define the part which is to be removed and establish the level to which the blood supply is to be preserved. The marginal vessels are carefully preserved, while the remainder of the mesentery is removed in the shape of a V, the main vessel being tied at its apex. Enough mesocolon must be excised to remove the lymphatics concerned.

The spur is made by approximating the two limbs of the bowel below the level of the demarcation sutures. The longitudinal bands are approximated for at least three inches, or more if possible, with interrupted catgut sutures. The bowel is now brought out, either through the original wound or through a new wound in the left iliac fossa if possible.

Before the abdomen is closed a safety-valve caecostomy is performed by the purse-string method with a Malecot or a de Pezzer catheter. A small oval of skin is removed from the right iliac fossa and the catheter is brought out through a stab wound in the muscles of the abdominal wall.

The peritoneum is now sutured with catgut snugly about the protruding limbs of exteriorized bowel. No attachment of the approximated limbs of bowel is made to the abdominal wall. After the closure of the abdominal wall, crushing clamps, either two pairs of Kocher clamps or a Rankin three-bladed clamp, are applied on both limbs of the bowel at the level of the demarcation sutures. The diseased portion of bowel is now immediately removed, preferably with a cautery. The proximal clamp is left on for sixty hours, the caecostomy allowing the escape of gas. The distal clamp is kept on for a week to assist in holding the bowel up to the wound. When the clamps are removed there is left a double-barrelled colostomy. An enterotribe or crushing clamp is applied to crush the spur. This is left on till it falls off, and there is now a single-barrelled colostomy in continuity.

The patient now has a colostomy and a caecostomy, the latter usually closing of its own accord. The colostomy may do so, but usually requires a further operation, which is performed eight to ten weeks later when the abdominal

wall is immunized to organisms present locally. An extra-peritoneal method of closure is used. The bowel is freed from the skin and muscle, but the peritoneal cavity is not opened. The bowel is now closed in its transverse axis by two layers of sutures, and the muscle and skin are closed. A small tube drain is placed down to the bowel through the lower angle of the incision in case of abscess formation. If the caecostomy remains open it may be treated in the same way.

The operation described above is usually applicable to all cases in which the bowel can be sufficiently mobilized to form a spur. However, in other cases, especially in carcinoma of the splenic flexure, this cannot be done, and if such a condition is diagnosed before operation the treatment should be as follows.

First, a preliminary caecostomy with careful exploration of the abdomen should be carried out as before described through a paramedian incision. Bowel washouts are given for fourteen days. Then one may resect the carcinoma of the splenic flexure and as much bowel as will bring the proximal and distal ends together without tension. The bowel is resected between crushing clamps and the clamps containing the crushed ends are laid together. The bowel is now reunited by means of the aseptic method with interrupted seromuscular catgut sutures. A drain is brought out through the flank in case of later abscess.

The caecostomy acts as a safety valve and usually closes of its own volition.

Now let us consider the patient with a cancer of the left side of the colon causing intestinal obstruction, either acute or acute-on-chronic; in this case it must be remembered that one is not treating a patient with a cancer of the bowel, but one with obstruction of the bowel. His pre-operative treatment must be short if the obstruction is acute, a little longer if it is chronic. It consists in the giving of fluids intravenously and the relief of any vomiting by means of a nasal Ryle's tube.

Spinal anaesthesia is the best. A right paramedian paraumbilical incision is used, the abdomen is quickly explored and the operability is determined. If the growth is operable, the establishment of a caecostomy in the right iliac fossa is all that should be done.

If the growth is inoperable a transverse colostomy should be established, as a permanent caecostomy is a dreadful thing. Many people always establish a transverse colostomy to relieve obstruction of the descending or sigmoid colon; but in the presence of obstruction the transverse colon may be much dilated, and it becomes a very difficult operation. Moreover, a transverse colostomy means a further operation for closure, whereas a caecostomy usually closes of its own accord. In the establishing of a caecostomy the caecum should not be pulled through the incision in the abdominal wall as some advocate, but the tube only should be allowed through the abdominal wall. If this method is used the caecostomy nearly always closes spontaneously.

At the end of the operation, therefore, one has determined where the growth is and its operability, and relieved the obstruction. The second stage may now be carried out when the patient is ready for it and after adequate preparation.

In obstruction of the transverse colon or sigmoid colon by a growth, if the patient is not too ill and if no artificial mobilization is required, one may perform an immediate Mickulicz-Paul operation with removal of tumour; but instead of the proximal end being left closed, a Paul's tube is inserted to relieve the obstruction. The risks of peritonitis are present in this operation, however, and the establishment of a caecostomy is always a safer operation.

If in performing a routine operation one find an unsuspected carcinoma of the colon, one should proceed as follows. If the bowel has to be mobilized to free the tumour, then be content with a caecostomy as a first stage and perform the second stage of resection later. If the growth is in the transverse colon or sigmoid colon, one may perform the obstruction resection operation with caecostomy that has been described.

Conclusions.

By these means the mortality and also the morbidity rates of these operations have been reduced. The high rates were largely due to the complications of infection varying from peritonitis to localized abscess formation.

The main disadvantage of graded operations is the length of convalescence; but surely this is not a large price to pay for the relief of a carcinoma.

CHRONIC LYMPHATIC LEUCHÆMIA AFTER SEVERE TRAUMA.

By J. B. THIESCH,

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CHRONIC, and also acute, myeloid leuchæmia has been observed after severe trauma, particularly of the bones. In a review of 40 cases of leuchæmia following traumata, Lewsen (1930) could quote only one doubtful case of lymphatic leuchæmia following a bullet wound of the bone, a case in which the lesion might have been acute myeloblastic leuchæmia. Eason (1918), Leoncini (1927), and Yaguda and Rosenthal (1939) each reported a case of chronic lymphatic leuchæmia following trauma in man, and Norikoff (1933) and Jarmal (1933) each reported another case in dogs. The traumata described, which were followed by myeloid and lymphatic leuchæmia, were severe lesions and fractures of the bones, severe general shaking or contusion of the body or its parts, and especially traumata over the left side of the body. The main symptoms displayed in the period between the occurrence of trauma and the clinical diagnosis of leuchæmia were pain over the site of the trauma, loss of weight and general malaise.

Because the cause of leuchæmia in man is unknown and leuchæmia following trauma is rather rare, it is suggested that in these cases there was a "predisposition" towards leuchæmia in the sense of a possible symbiosis of a leuchæmic agent with the cells of the hematopoietic or the lymphatic system, or that a subleuchæmia and aleuchæmic state existed in the patient prior to the accident. The fact that in established cases of myeloid and lymphatic leuchæmia, trauma, particularly of the spleen, heavy work, or even careless examination of the patient, aggravates the disease and may accelerate the fatal outcome, favours the above-mentioned theory (Emile-Weil and Bousson, 1936).

Abnormal dispositions of the lymphatic system are known, such as hyperplasia and general enlargement of the lymphatic glands, *status lymphaticus* and *status thymolymphaticus*.

It is understandable that when patients have an abnormal lymphatic system one may expect a pathological response from a system which is already out of balance and may need only a slight irritation to be thrown completely out of order. By way of illustration the following case is reported.

Report of a Case.

A man, aged fifty-one years, apparently quite healthy, had a severe motor car accident. He was thrown from a lorry and suffered abrasion and contusion of his head, left arm, left shoulder and left hip. He was admitted to hospital and was unconscious for the next eight days. After the accident he lost three stone in weight. After he had regained consciousness he noticed an enlargement of the lymph nodes in his groin and left axilla, which he showed to his wife and a nurse. The glands were the size of marbles, hard and slightly painful. After three weeks the patient was discharged from hospital. Thirty days after the accident he noticed a lymph-glandular swelling on his neck, which the doctor in charge regarded as secondary to a hæmatoma on his head. Forty-one days after the accident the patient was again admitted to hospital because of general malaise and headache, and his skull was opened because of a paralysed left arm. Two and a half months after the accident and in the following month the patient noticed a continuous increase in size of the lymph nodes in the groin,

axilla and neck associated with pain, and complained to the sister of the hospital about it. Five months after the accident the doctor noticed the swelling of the lymph glands in the axilla and groin and also found an enlargement of the spleen. Examination of the blood revealed slight anaemia and 135,000 leucocytes per cubic millimetre, and the diagnosis of lymphatic leuchæmia was made from the blood film. Subsequently the patient was treated with deep X rays, to which he responded well. During the next four months he complained continuously of pain and tiredness; his condition was typical of chronic lymphatic leuchæmia, with anaemia, general enlargement of lymph glands and splenic tumour.

Discussion.

In the case described we have the facts of severe trauma, affecting especially the left side of the body, followed by rapid development of chronic lymphatic leuchæmia within five months. There is a characteristic history of leuchæmia and enlargement of the lymph glands, which led directly to the diagnosis five months after the accident. One has need to consider the role of the accident. It cannot be doubted that from eight days after the accident, when the first lymph gland enlargement was noticed, up to the time the clinical diagnosis was made five months later, a subleuchæmic state, or in other words, an undiagnosed leuchæmia, existed in the patient. In the week between the accident and the regaining of consciousness, the leuchæmic process must have developed to such a degree that it became obvious to the patient. It is difficult to assume that the leuchæmia had been active in the patient before the accident, because of his apparently perfect health. It seems more likely that the patient had an abnormal predisposition of his lymphatic system and reacted with the development of leuchæmia to the severe irritation of the trauma. If the patient had been in the "incubation" period of his leuchæmia, which usually with indefinite symptoms occupies from one to four years (Forkner, 1938), one has to admit that the outburst of the leuchæmia was accelerated.

In a rare case like this one has also to consider the mere accidental coincidence of trauma and leuchæmia. The frequency of all types of leuchæmia is approximately 1 in 36,000 per head of the population (Nielsen, 1932, and Henschen, 1937). Of these only a fraction are lymphatic, and of these only a part chronic. Chronic lymphatic leuchæmia is most frequent in the decade from forty-six to fifty-five years (Forkner, 1938, Ward, 1917, Minot and Isaacs, 1929, and Curschmann, 1935). The average "incubation" period or period of indefinite symptoms and complaints preceding the clinical diagnosis is about one to four years, and the average prospect of life is from three to four years (Forkner, 1938) from the time of the clinical diagnosis till death.

The rate of motor-car accidents with deaths and severe injuries in South Australia is approximately 1 in 1,000 of the population per year, and the probability of the coincidence of leuchæmia and motor-car accidents would be 1 in 1,000 multiplied by 36,000 multiplied by approximately 4, because we are dealing with a chronic lymphatic leuchæmia (1 in 144,000,000). We therefore bring in direct relationship the trauma and the onset of leuchæmia. From this and the fact that the patient belongs to the age group in which chronic lymphatic leuchæmia is most frequent, it seems probable that the patient had an abnormal predisposition to a pathological reaction of his lymphatic system, and that the severe trauma directly brought about the leuchæmia—pulled the trigger to release his pathological predisposition. If we believe that the trauma injured the patient during the "incubation" period of his leuchæmia, we have to acknowledge that the trauma suddenly lowered his resistance and permitted the leuchæmic agent to produce the leuchæmia (similar to the lowering of the resistance after previous irradiation of leuchæmic animals). One has also to remember the aggravating influence of trauma in existing leuchæmia, as was mentioned above, and the possibility that an existing symbiosis of leuchæmic agent and cell was upset by the trauma.

The next question is whether the patient would have developed his leuchæmia without the trauma. A definite

decision cannot be made; but one would expect that any other adequate irritation of his lymphatic system or other factors lowering his resistance against the leucæmic agent could bring about leucæmia.

The question of compensation is difficult. Yaguda and Rosenthal (1939) are in favour of compensation in cases in which the development of leucæmia follows an accident within six months and bridging symptoms are noticed in the interval. In the case under discussion one has, of course, to grant compensation for the accident and its direct consequences—pain, weakness of the left arm and paralysis, decreased ability to work, and direct costs arising out of the accident. The problem of compensation for the leucæmia is a more difficult task. The prognosis of life in chronic lymphatic leucæmia is on the average three or four years (Forkner, 1938). In combination with the lesions of the severe accident, it will in this case most probably be shorter. Compensation for a prospect of years of life is impossible—lost years cannot be paid off; but one could consider granting compensation for the pain and misery caused by the leucæmia during the few years to come. If the patient did not develop leucæmia, he would have to be compensated for his lost ability to work and to provide for himself the necessary income for the rest of his life. With the established leucæmia and the short prospect of life one would favour much smaller compensation, which would be just sufficient to carry him over the next years to his early death. The decision as to compensation will be in the hands of the court, which, as in many rare and unusual cases, faces the problem of divergent medical opinion, caused in this special case by the lack of knowledge of the cause of leucæmia.

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Reports of Cases.

RECRUDESCENCE OF SYPHILIS FOLLOWING CHRYSOTHERAPY.

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The two cases herein reported are interesting from a few standpoints and are published mainly because of the extraordinary and unforeseen results of gold therapy. In both cases syphilis was unsuspected; and in one in which the patient was under observation for a period of years no symptoms suggestive of this disease were ever noticed and no sign was apparent. Both patients were under treatment with gold salts for rheumatoid arthritis, and it was not until chrysotherapy was instituted that the manifestations of syphilis became clinically apparent.

Chrysotherapy has been stated to be particularly efficacious in chronic refractory cases of syphilis. In view of these two cases it would seem peculiar if gold salts could be regarded as being antisyphilitic in the ordinary sense of the word. It appears that gold salts, which conceivably may act as oxidative catalysts, actually stimulated the spirochæte, causing its metabolism to increase and making it an active, vigorous organism capable of producing obvious specific lesions. Apparently gold had caused the latent spirochæte to take on a more vigorous role and to leave quiescence for renewed activity. No history of secondary or tertiary rashes was obtained in these two cases prior to the exhibition of gold salts.

It is to be regretted that the Wassermann test was not performed in either case previous to the institution of gold therapy.

Case I.

The patient was a married woman with no children, who when first examined on September 28, 1936, complained of pain in the knees and stiffness and swelling of the fingers, present for eighteen months. Her husband was alive and well. On examination no abnormality was detected in the heart, lungs or abdomen; the skin was slightly thickened, sclerodermatous and dry. A slight thyroïd deficiency was present. The patient was suffering from mixed arthritis with achlorhydria, secondary anaemia and a slightly raised blood sedimentation rate. Severe pallor was present, and this was thought to be primarily due to the anaemia.

A blood count gave the following information: the red corpuscles numbered 3,840,000 and the white corpuscles 6,400 per cubic millimetre; the colour index was 0.9 and the hæmoglobin value was 70%. A differential leucocyte count showed that 63% were neutrophilic cells, 30% were lymphocytes, 4% were monocytes and 3% were eosinophilic cells. No toxic changes were present, and the sedimentation rate was 36 (Westergren). She was given dilute hydrochloric acid and vaccine therapy; *Streptococcus viridans* was grown on culture of swab taken from the throat and stomach contents. On January 25, 1937, the patient had a severe reaction after the vaccine, and on February 18 vaccine therapy was stopped, as severe pain was present in all the affected joints. The patient had lost seven pounds in weight. At this time the red corpuscles numbered 4,860,000 and the white corpuscles 6,600 per cubic millimetre of blood, the hæmoglobin value was 78% and the colour index was 0.8. The blood sedimentation rate was 58. It was decided that 0.05 gramme of "Mycocrisin" should be given once weekly, a start being made with 0.025 gramme. The patient's blood condition had improved with the administration of hydrochloric acid and iron, but the pallor remained almost unaltered. She was given five injections of gold, a total of 0.2 gramme, and then stomatitis intervened and gold therapy was stopped. One month later she again attended the out-patient department, still complaining of stomatitis; but she now exhibited some small, hard, circular indurations and one typical gumma with a "wash leather" base. A diagnosis of tertiary syphilis was made and confirmed by a Wassermann test, which produced a strongly positive reaction. Her arthritis had been considerably relieved as regards pain, swelling and limitation of movement.

Antisyphilitic treatment with "Novarsenobillon" was begun, and seven weeks later the gummata had disappeared. Twenty-four injections of bismuth were given, and it was noted that her pallor had greatly diminished. One month after the last injection of bismuth the joint pains recurred, and four months later again the pain and swelling had returned to such an extent that gold therapy was again instituted. After twelve injections (three months' treatment) the arthritis had almost completely disappeared and there was no visual evidence of syphilis, but the Wassermann test still produced a positive reaction.

The patient left off attending the out-patient department before another Wassermann test was performed. No treatment was given for sixteen months, but recurrence of pain caused her to seek advice again. Another course of twelve gold injections caused recession of the arthritis, but slight stomatitis recurred. There was no recurrence of the syphilitic lesions. On March 20, 1941, the Wassermann test failed to produce a reaction.

Case II.

The patient was a woman who had been treated for years at the out-patient department for spondylitis. At the time when I first examined her, early in 1936, she complained of pain in the joints and dry skin and of aching pain in the lumbar region. Her systolic blood pressure was 174 millimetres of mercury and her diastolic pressure 96. An X-ray examination of the heart revealed hypertrophy and diffuse aortic enlargement. A blood count revealed that the

white corpuscles numbered 9,400 per cubic millimetre; 54% were neutrophile cells, 41% were lymphocytes, 4% were monocytes and 1% were eosinophile cells. There was no "shift to the left".

On May 9, 1936, an X-ray examination of the back and knee joints revealed early osteoarthritis in the lumbar portion of the spine and the knee joints; a streptococcal vaccine was made from material taken from the patient's throat, and injections were given twice a week. Her condition failed to improve in spite of various therapeutic measures, and it was not until October 19, 1939, that she came into the care of the rheumatological department. On November 8 mixed arthritis was found to be present and treatment with "Mycocrisin" was begun; the commencing dose was 0.01 gramme, to be increased to 0.05 gramme. One cubic centimetre of "Redoxon" was added to each dose, and aspirin was given to relieve pain. By January 4, 1940, she had received eight doses, a total of 0.4 gramme. On February 29 the right eye was inflamed and early iritis was present; the condition of the joints had improved, but a rash had broken out on the hands and forearms and in the flexures of the elbows. There were two types of rash, (i) a seborrhoeic rash resembling a "gold rash", which was itchy, and (ii) a rash the colour of raw ham, which was raised, papular, not sore or itchy, and syphilitic in appearance. On March 4 the Wassermann test produced a positive reaction and the patient was given "Quinby", three cubic centimetres a week. On May 2 two rashes were still apparent, (i) a rash in the cubital fossa, which was watery and itchy and not altered by the administration of "Quinby", and (ii) a rash on the hand, the colour of raw ham, not itchy, and obviously reduced by the administration of "Quinby".

By June 6 the syphilitic rash had entirely disappeared; the dermatitis in the cubital fossa was more painful and fissures were apparent. At this stage it was thought that the patient's previous history might be of importance. She had had ten children; the eldest, aged twenty-eight years, had died from pneumonia following influenza. The second and third children were stillborn, but the last seven were all well.

By August 15 the patient had had seven doses of "Quinby"; she contracted bronchitis and did not attend the clinic for two months. When she was next examined the syphilitic rash had disappeared and the "gold rash" was diminishing. By January 9, 1941, the patient had had twelve doses of "Quinby" and the Wassermann test failed to produce a reaction. On February 6 the joint condition was much improved, but some active arthritis was still present. The systolic blood pressure was 174 millimetres of mercury and the diastolic 100.

The history of dead-born children may be taken as an indication of a possible syphilitic infection; but one gleans from the history that the patient's last seven children are all alive and apparently healthy. For many years the infection must have remained dormant, until the administration of gold salts stimulated it into sudden activity resulting in the appearance of a typical non-irritating "raw ham" coloured rash. A "gold rash", irritable and seborrhoeic, was also present; this cleared up very slowly. Only 0.4 gramme of gold was given before the syphilitic rash became manifest. Although only twelve injections of "Quinby" were given, each of three cubic centimetres, the Wassermann reaction gradually ceased to be obtained. The arthritic condition also considerably improved, as it often does after a "gold rash".

Discussion.

These two cases suggest the following considerations.

1. Gold may act as a metabolic stimulant to the *Spirocheta pallida*, activating it and producing active syphilitic lesions even though the disease has been latent for years. This may explain peculiar nervous manifestations in some cases after gold therapy. I have seen dementia follow gold therapy; no other cause could be found for its occurrence.

2. Gold therapy may be a useful adjunct to arsenic or bismuth, as it may activate the spirochete and thereby render it more susceptible to these two well-known anti-syphilitic remedies. It would be interesting to try the effect of gold and bismuth in refractory cases of syphilis, or even to employ a combination of these two chemicals to try to expedite recovery and cure in ordinary cases of syphilis. The rapid disappearance of the Wassermann reaction in Case II suggests this line of therapy.

3. If gold in small doses can activate *Spirocheta pallida*, it probably activates any cell of the body where it is absorbed.

I have always noticed that in atrophic glossitis associated or unassociated with rheumatoid arthritis, gold therapy will produce in many cases a normal membrane, and the glossy, shiny, smooth appearance will disappear. It has the capacity

to stimulate the mucous membrane of the tongue and in many cases to bring it back to normal. This result would seem to belong to the same category as the effect of gold on the spirochete, and suggests that gold in combination with sulphur (as in all active gold salts) has the power to stimulate to activity different forms of cells.

Since gold in combination with sulphur and glucose (as in "Solgonal") or with sulphur and malic acid (as in "Mycocrisin") can act as an oxidative catalyst outside the body, it is probable that its mode of action in the body is that of an oxidative catalyst giving oxygen to certain cells and thereby stimulating them from a stage of quiescence into one of activity.

This conception of its role may be important, especially as regards rheumatoid arthritis, because many methods employed in alleviating this disease have as their objective increased blood supply and oxygenation, and thereby aid oxidation. The initial increase of the sedimentation rate so often seen in cases of arthritis treated with gold, as also the increased pains and acute exacerbation of the joint swellings, may be due to the same metabolic stimulant action.

This same idea may further open up the field of oxidative catalysts and their importance in the body processes, especially in disease, when oxidation becomes subnormal. It is true that catalysts only aid these chemical processes; but as adjuncts in industrial chemistry they are of extreme importance.

The process of cellular oxidation is still far from complete elucidation; but the knowledge gleaned from a study of the oxidative catalysts used in chemistry may help in further unravelling the tangled skein, and above all in curing or alleviating disease.

Reviews.

MAN AND DISEASE IN OTHER ANIMALS.

It pays the medical man to know a good deal about the diseases of the animals he has domesticated and of other animals with which he comes in contact. Some of these diseases may affect man, and human pathology may be illuminated by the study of disease in the lower animals. Dr. T. G. Hull, aided by a number of contributors, in "Diseases Transmitted from Animals to Man", has brought together a large quantity of useful information, much of it historical and much statistical, of diseases common to man and other animals. The work naturally has an American bias, which results in hardly a word being said about hydatid disease in man, sheep and cattle, this disease being so rare in the United States. The chapter on tularemia, a condition first recognized in America but since recorded from many countries in Europe and also from Japan, is one that should be read by Australians, so that the disease may be recognized when it first reaches these shores before it becomes established—it would be disastrous if our wild rabbits became infected. Other chapters deal with tuberculosis (human, bovine and avian), anthrax, brucellosis, milk sickness (due to a toxic plant derivative in the milk and responsible for many animal and even human deaths in the early days of colonization in America), smallpox *et cetera*, glanders, rabies, psittacosis, swine erysipelas, louping-ill, equine encephalomyelitis, Rift Valley fever, and infections due to foods, animal parasites and fungi. One section deals with such rodent affections as plague, the leptospiroses and the typhus fevers, and another with human diseases which may be spread by animals, such as sore throats, scarlet fever and diphtheria. Section IV is concerned with botulism, tetanus and gas gangrene, and Section V with the role of various animals in the spread of disease. A few misprints require correction. In the section on psittacosis, roseolas is meant for rosellas, and the grass parakeet is *Neophema*. The statement under plague that kangaroos have been found naturally infected may suggest that such infection occurred in the wild state, whereas it was in the old Zoological Gardens at Moore Park in Sydney, and was probably one of the reasons for the transference of the "Zoo" to Taronga Park. Dr. Hull's work is a useful one. In it the author has assembled much scattered information dealing with diseases common to man and the lower animals, thus making it readily available.

"Diseases Transmitted from Animals to Man", by T. G. Hull, Ph.D.; Second Edition; 1941. Springfield: Charles C. Thomas. Royal 8vo, pp. 416, with illustrations. Price: \$5.50 net.

The Medical Journal of Australia

SATURDAY, NOVEMBER 1, 1941.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

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THE MEETING OF THE FEDERAL COUNCIL.

THE meeting of the Federal Council of the British Medical Association in Australia reported in this issue was one of the most momentous that has been held in recent years. The Council's agenda paper always includes subjects that are of vital importance to the practice of medicine throughout the Commonwealth and also to the corporate life of the profession in this country. When we state that the Council deals with the practice of medicine, we use this term in its widest sense and with special emphasis on its preventive aspect. The report of one Federal Council meeting is as a rule very much like that of another. As soon as one problem is solved a similar question arises, and some problems seem to defy solution. The recent meeting is momentous because of the discussions on public health progress after the war and on a general medical service for Australia. These subjects are so closely related that they might almost be considered under the one heading. They are not new; certain aspects have been before the profession on more than one occasion, and other aspects have been looming clearly on the horizon for so long that both subjects should be familiar to all but the most obstinately blind. We have repeatedly urged the medical profession to determine its policy in regard to the future of medical practice, and the recent meeting shows that certain important conclusions have been reached.

The first mention of the planning by the Federal Council of a general medical service for Australia is found in the report of the meeting of the Council in February and March, 1940. At that meeting consideration was given to a resolution of the Federal National Health Insurance Committee that the British Medical Association in Australia should have as its policy the provision of a complete medical service for the nation. The Federal Council had before it on that occasion a copy of the pamphlet "Planning for Health", and it was decided that Dr. George Bell and Dr. W. F. Simmons, with powers of

cooption, should act as a subcommittee to report on the pamphlet at the next meeting. At the meeting of the Federal Council in September, 1940, the subcommittee presented its report, which dealt with a general medical service for Australia. It was then resolved that at the subsequent meeting (March, 1941) the report should be considered by the Council, as by that time all the Branch councils would have had time to study it. Unfortunately, at the meeting of March, 1941, the Branches were not all prepared to state their views, and consideration was again postponed until the meeting reported in this issue. The report as finally adopted by the Federal Council is published in *extenso* in the account of the meeting. Readers are asked to study this report and also the discussion on its several clauses. According to this plan for a medical service provision would be made for all persons in the community who were in receipt of an income less than a stated amount; presumably the unemployed and the unemployable would be included. It must also be noted that in adopting this report the Federal Council has declared its preference for a *per capita* type of payment rather than payment by fixed salary. This is of fundamental importance. Having accepted this basic principle, the Federal Council decided not to consider the tentative document submitted by a subcommittee of the Victorian Branch council on a whole-time salaried service. This decision was a pity. At the outset the general opinion of members seemed to be that all types of service should be discussed. It would have been interesting and helpful if the implications of a full-time salaried service had been argued round the council table. As it is, the Federal Council subcommittee's report goes out to the Branches "for their information" as the type of service thought by the Federal Council to be best suited to Australian conditions. (In this statement the sparsely populated areas of the Commonwealth are excepted.) We can expect that it will be discussed and freely criticized by Branch members.

But the Federal Council subcommittee's report is not the only document dealing with medical practice which was considered by the Council and will be criticized by members of the profession. The Council discussed clause by clause the report of the subcommittee of the National Health and Medical Research Council, which was published in this journal in the issue of August 16, 1941. In view of statements appearing in many of the newspapers in different parts of the Commonwealth to the effect that the National Health and Medical Research Council has planned to nationalize the medical profession of Australia, we must again draw attention to its true nature. The report, as we have already pointed out, was drafted in several sections according to the "principal lines of evolution of public health and social medicine which have been suggested by different authorities". It was a discussion in progressive sequence "from present conditions to the full community control of medical practice". Clearly we were justified in our view that the document was intended to be a basis for future discussion. It is true that in the daily Press the newly appointed Commonwealth Minister for Health has declared himself to be in favour of a salaried medical service, but no statement has been issued which would show any connexion between the Minister's declaration and the National Health and Medical Research Council's report. The possible con-

nexion between the two is an added indication that every member of the profession should study the report. Criticism there will surely be, but unless it is made with knowledge and understanding it will be useless—a vain beating of the air with words. The report is in fact a logical statement of the "principal lines of evolution of public health" as suggested from time to time, and in the words of the General Secretary of the Federal Council contains nothing essentially new. By its clause-to-clause consideration the Federal Council showed that it understood the significance of the document.

If the whole subject is regarded dispassionately it will be clear that the Federal Council's document may be said to mark one stage in the progressive sequence "from present conditions to the full community control of medical practice". One member of the Federal Council stated at the recent meeting that the Council did not know what the profession wanted or what it would be offered. On weighing the evidence presented to it by the Branches the Federal Council has adopted a certain plan as in its opinion suited to Australian conditions. The Branches are being "informed" of this fact. Clearly something different may be offered to the profession. The profession has now the chance to determine what its attitude to far-reaching proposals would be if they were made. It would therefore appear that the adoption by the Federal Council of the report of its own subcommittee is to be regarded as a preliminary step and nothing more. What the next step will be is not clear, but the National Health and Medical Research Council has stated in Clause 37 of its report that there is "need for critical and dispassionate examination in consultation with the medical profession of the place of the doctor in society before the Insurance Scheme is brought into operation, or before any other National Health Scheme is considered".

Current Comment.

CHEMOSURGICAL AMPUTATION FOR GANGRENE.

In the past many difficulties have attended the treatment of diabetic gangrene and to a less extent the treatment of senile gangrene, and therefore the proposal of a new method of treatment merits the full consideration of those physicians and surgeons concerned with the treatment of these diseases. F. E. Mohs, E. L. Severinghaus and E. R. Schmidt¹ have described what they call the chemosurgical treatment of gangrene; it involves, first, the chemical fixation of the gangrenous part and, secondly, the surgical excision of all but a thin layer of the tissue thus fixed. The surface keratin is rendered permeable to zinc chloride by the application of a keratolytic agent such as dichloroacetic acid. The zinc chloride paste (containing 40% zinc chloride as described by F. E. Mohs²) is then applied in a layer two millimetres thick to a level just proximal to the limits of the visible gangrene. The material is held in place by a cotton dressing, and excessive drying is avoided by the application of a cover consisting of a second layer of cotton, spread with "Vaseline". After twenty-four hours the part is fixed and amputation may be performed. Only the tissue thus fixed is incised, and there is neither pain nor bleeding from this procedure unless the incision is inadvertently carried into living tissue. Any bleeding vessels encountered may be coagulated by the application

of small squares of fixative-impregnated gauze under momentary pressure. By this means bleeding from quite large arteries can be readily stopped. If the cut surface presents an area of soft greyish tissue it is necessary to carry fixation further. Often gangrenous tissue extends some distance up along the tendon sheaths, periosteum and other structures. Fixation and excision are repeated until a gangrene-free saucerized area results. Then sterile gauze dressings covered with "Vaseline" or warm compresses are applied, and a separation of the thin final layer of the fixed tissue is awaited. In favourable cases most of this layer can be removed after a week or ten days. The bone is left for another week or so to allow a line of demarcation to form between the fixed and the unfixed bone. Adhesions are allowed to form around tendons so that when they are cut they will not retract into their sheaths and thus form sinuses which may cause recurrence of infection and gangrene. Mohs, Severinghaus and Schmidt have treated 66 gangrenous extremities of 66 patients. Thus 37 of 58 diabetic gangrene lesions healed, and two out of six senile arteriosclerosis lesions healed. We forbear to quote these figures in percentages as these authors have done, holding as we do that any reference to percentages with such small numbers is unjustifiable and likely to lead to the drawing of false conclusions. On these few cases the authors suggest that the difference depends largely upon the predominant influence of infection in most cases of diabetic gangrene as contrasted with the predominant influence of ischaemia in most cases of arteriosclerotic gangrene. Possibly they are right. They also concluded that the younger the patient, the more definite the line of demarcation between the gangrenous tissue and the living tissue, or the greater the reaction of the living tissues to the gangrenous tissues, the better were the chances for healing. As with other methods of treatment, the efficiency of the circulation in the extremity is a prime factor in determining the outcome. In many cases of diabetic gangrene all known conservative methods of treatment are doomed to failure, and mid-thigh amputation soon becomes necessary. Mohs and his co-workers state that the only certain means of determining the response in a given case is to amputate by the chemosurgical method and then to observe the result for ten days. If by this time the layer of fixed tissue has not begun to separate, these authors conclude that it will never separate, and they suggest that the leg should be amputated immediately. The advantages claimed for chemosurgical amputation over conservative surgical amputation are that the fixative chemically sterilizes the treated area, there is no super-added tissue necrosis from ligatures and sutures which may act as a source of further extension of the gangrene, and the optimum level for amputation can be selected more accurately by the chemosurgical method than by surgery, for by its means each unsuspected gangrenous sinus can be followed. In their series of 60 cases these authors had no breakdowns of the scars once healing had occurred, and there were no operative deaths in the series. This method of chemosurgical treatment was first introduced by Mohs for the treatment of superficial malignant lesions, and since then he has used it in many hundreds of such cases, both in man and in laboratory animals, without any untoward effects. The number of cases of gangrene to which the method would be applicable is probably rather limited, but it seems to be a line of treatment which should be subjected to further investigation.

SUBACUTE COMBINED DEGENERATION OF THE SPINAL CORD.

THE possibility that subacute combined degeneration of the spinal cord is a deficiency disease has been investigated on many occasions by replacement therapy with the various vitamins. It was to be expected that when once degenerative lesions had occurred in the postero-lateral columns these lesions would be permanent and that they would not respond to replacement therapy even though the lesions themselves were originally due to a nutritional or

¹ *Annals of Surgery*, August, 1941.

² *Archives of Surgery*, February, 1941.

other deficiency factor. In addition to degenerative lesions within the brain and spinal cord other factors have been suggested by various workers to play a part in the causation of the neurological signs and symptoms of subacute combined degeneration of the cord. Among these are such dysfunction of the end-organs of the peripheral nerves as is supposed to occur in cases of severe anemia, degenerative changes in the peripheral nerves that may be due to the anoxia of severe anemia or in some cases to a food factor deficiency or both, and oedema of the cord associated with degenerative processes in the posterolateral columns. In some acute cases this oedema is believed to be severe and to be responsible for considerable neural disturbances. Any slight improvement that may occur in the signs and symptoms of sufferers from this disease may be explained by prevention of any further progression of the neurological complications possibly through some increase in the efficiency of the undamaged portions of the nervous system, by cure of any reversible structural changes which may still be present in the peripheral nerves, and by an improvement of the patient's well-being which may possibly better his neurological function.

The response of the bone marrow and the peripheral blood to adequate liver therapy in a patient with untreated pernicious anemia is more apparent than the cessation of development of further neurological complications. This definite, though less obvious, effect on the nervous system may have been taken to indicate a common deficiency basis for both the neurological and the hematological changes of subacute combined degeneration of the spinal cord and pernicious anemia. This suggestion is rendered unlikely, however, by the occurrence in some patients of pernicious anemia in the absence of neurological changes and the rarer occurrence in other patients of typical subacute combined degeneration of the cord, but with a normal blood picture. It would be interesting and instructive to determine by sternal biopsy if, in these latter patients, the bone marrow was also normal or if there was an early megaloblastic response with the continued production of normal peripheral blood. The occasional complication of subacute combined degeneration of the cord in cases of macrocytic hyperchromic anemia secondary to sprue, worm infestations and other lesions of the gastro-intestinal tract points to a deficiency origin of both the hematological and the neurological changes, but does not necessarily indicate the same deficiency as the sole cause of both these diseases. J. C. Zillhardt, K. MacLean and W. P. Murphy¹ have investigated the effect of vitamin B₁₂ (thiamin) on the residual neurological complications in patients with adequately treated pernicious anemia. As might have been expected, although these patients had shown no aggravation of the neurological complications once adequate liver therapy was instituted, with the administration of thiamin slight initial improvement occurred and despite continued treatment with thiamin this improvement soon ceased. The principal improvements found on clinical examination were in the temperature sense, in pain sense, and in two-point discrimination. The extent of such improvement varied from patient to patient. Caution is necessary in drawing conclusions from a study of this kind. One of the control patients showed improvement in pain sense, in temperature sense, and in two-point discrimination although he had received only normal saline solution injections and no thiamin. These authors point out that in the most ideal circumstances an attempt to evaluate quantitatively neurological signs and symptoms is a task subject to grave errors. The intelligence of the patient and his cooperation, as well as the judgement and patience of the physician are very important factors. The element of disposition and of physical and mental fatigue on the part of both the patient and the examiner, as well as the inaccuracy of existing methods of examination, come into play. The many possible variable factors are only too familiar to those who have occasion to undertake neurological studies, and it was therefore with reserve that these authors attempted to interpret their findings. Nevertheless, from their results there would seem to be no doubt that the regular intramuscular injections of

thiamin for a period not exceeding two months to patients suffering from subacute combined degeneration of the cord, and yet receiving adequate liver therapy, is accompanied by slight but definite lessening of the neurological signs and symptoms. This being so, and the condition of subacute combined degeneration of the cord being one in which it is not otherwise possible to do more than stop the progress of the disease by liver therapy, such a course of thiamin is to be strongly advocated.

BACTERIOPHAGE IN DRINKING WATER.

In the bacteriological examination of drinking water it is customary to attempt the culture of coliform bacilli. The presence of *Bacterium coli* is taken to indicate faecal contamination. Pathogenic organisms are isolated with difficulty from water. But, according to C. L. Pasricha and A. J. H. de Monte, the isolation of the bacteriophages of these organisms is comparatively easy.² Pasricha and de Monte suggest that attempts at the isolation of bacteriophages active against *Vibrio cholera*, *Bacterium typhosum*, *Bacterium flexneri* and *Bacterium shiga* should be employed as a routine in the bacteriological examination of water. They point out that the mere presence of *Bacterium coli* indicates nothing more than faecal contamination, and gives no indication of the source of the faeces (it may have come from some other animal than man), nor any information as to the presence or absence of pathogenic organisms. They examined over 500 samples of water from rivers, tanks and wells in India and isolated bacteriophages from about one-third of them. The best samples were from stored spring water in rural areas. Only seven of 46 such samples were found to contain typhoid and dysentery bacteriophages and none contained a cholera bacteriophage. They assume that the presence of bacteriophage indicates contamination by human excreta containing the bacteria against which the bacteriophage is active. This is probably, but not necessarily, true. They did not attempt to culture *Bacterium coli* or other organisms from the same samples. Such work would have to be done before anything approaching a true evaluation of their experiments could be made. Assuming that their views are correct, what then? They do not suggest that water containing bacteriophage should be condemned and other waters classed as wholesome whether or not they contain *Bacterium coli*. If d'Herelle's views are correct (there are many authorities who think they are not) the presence of bacteriophage might almost be regarded as indicating that the water is, or shortly will be, innocuous. However, to most civilized people any evidence of faecal contamination of water will be a sufficient deterrent from drinking it. It is important to know whether water contains pathogenic bacteria. But it is more important to know first whether it is contaminated at all. For if there is contamination the presence of pathogenic bacteria must always be suspected. In the present state of our knowledge of the bacteriophages it is difficult to see how much value there is in the work carried out by Pasricha and de Monte. All we can say is that it suggests an interesting field for research.

INDUSTRIAL FATIGUE AND AUSTRALIA'S WAR EFFORT.

THE attention of readers is directed to a letter from Dr. H. M. L. Murray in this issue. Dr. Murray refers to the leading article published in this journal on October 18 dealing with industrial fatigue and Australia's war effort. His statement that workers are not willing to be led is of the utmost importance and must be accepted, since he is one of the few people in Australia who can speak with authority on this subject. His words make the duty of the Government doubly clear; we would urge the Federal Council to use them as an additional weapon when it approaches the Minister again. This approach must not be long delayed.

¹ *Annals of Internal Medicine*, July, 1941.

² *The Indian Medical Gazette*, August, 1941.

Abstracts from Medical Literature.

MEDICINE.

The Heart in Military Service.

E. S. KILGORE (*The Journal of the American Medical Association*, July 26, 1941) discusses heart examination and diagnosis in military service. The real problem is not that of genuine heart disease, which is usually fairly easily diagnosed and treated. Lewis has shown that in 1914-1918 five-sixths of the British Army diagnoses of heart disease were erroneous. The so-called functional disturbances gave rise to most of the trouble—benign murmurs and arrhythmias, simple tachycardia and temporary elevation of blood pressure from the excitement of a medical examination. Some of those affected by these last conditions may be candidates for sustained hypertension in later life, but should not be regarded as abnormal without repeated observation under conditions of quiet and reassurance. Sinus arrhythmia and premature contractions are not significant of disease. Systolic murmurs can be found in many healthy young adults in different postures, after exercise and in different phases of respiration. Generally heard over apex or pulmonary area, soft murmurs affected by respiration or posture are usually not pathological. If the heart is not enlarged, even more persistent murmurs may have little significance. Symptoms such as dyspnoea, tachycardia, tremor, sweating, giddiness and palpitation are included under effort syndrome. These are not heart symptoms, but usually constitutional. Any concentration of attention on the heart may give rise to or aggravate such a condition. Fear is nearly always an important factor, and the suggestion of cardiac mischief may be intentionally or unintentionally made by the doctor. The gauging of fitness should depend more on the observation of the general appearance and behaviour during and after exercise than on auscultation of the heart and estimation of the blood pressure, which may lead to the creation of masquerade heart disease.

Orange Juice and Gastric Acidity.

In view of the necessity of ensuring an adequate vitamin C intake for patients on peptic ulcer diets and the experience of many practitioners that orange juice does not agree with patients suffering from hyperchlorhydria, Frank W. Clayton *et alii* (*The American Journal of Digestive Diseases*, February, 1941) decided to use orange juice as a test meal for analysis of gastric acidity. In a series of 16 patients, only two of whom had any known lesion in the gastrointestinal tract, fractional test meals were performed and tea, toast and milk-cream were used as controls for the orange juice test feed (previously neutralized), a constant volume of 250 cubic centimetres being used. The average emptying time after the orange juice meal was one hour and forty-five minutes, thus contradicting the belief that fluids pass almost immediately out of the stomach following ingestion. In nearly all instances the free acidity from orange juice was higher than that

produced by the Ewald meal. The average time of acme of free acidity produced by orange juice was one hour and the highest average was 63 cubic centimetres of N/10 sodium hydroxide per 100 cubic centimetres of gastric juice, or 75% greater than that produced by the Ewald meal. The average highest total acidity produced by orange juice was equal to 112 cubic centimetres of N/10 sodium hydroxide per 100 cubic centimetres of gastric juice.

Psychological Factors in Aviation.

M. R. HARROWER ERICKSON (*The Canadian Medical Association Journal*, April, 1941) discusses psychological factors in aviation. After a long preamble indicating the necessity for investigation of the psychological fitness of the aviator, the author states that probably the function of psychology in respect to the aviator is to study his adaptability to the work required of him. The aviator is examined by a standard intelligence test and by certain special tests which necessitate handling the rudder and the control stick of an apparatus on the ground, with a record of the reaction times; this is the Mashburn serial action test. However, 90% of failures in training are said to result from emotional instability. In order to test for this condition various tests are used; the Berwienter personality inventory, which involves 125 questions answered by the pilot, has been found unsatisfactory. The other method is by a personal interview, which, according to Armstrong, should take three or four hours; but the objection to this method is a very understandable lack of cooperation on the part of the candidate. The author solves the problem by recommending the Rorschach method of personality evaluation. From this it is possible to construct an accurate picture of the personality, with the tendencies towards stability and imbalance, the strength of its motivating drives, its tendencies to react to stimuli from within or without, and the efficiency and reliability of the means used to combat, control or repress instinctive reactions, and many others. So far, owing to the complexities and special difficulties of the problem, no satisfactory means of psychological evaluation have been achieved to determine aptitude for flying. It is hoped that the Rorschach test may give valuable help in this direction.

Cerebral Manifestations of Bacterial Endocarditis.

ELAM C. TOONE, JUNIOR (*Annals of Internal Medicine*, March, 1941) reviews the histories of 35 cases of bacterial endocarditis with a view to assessing the incidence of central nervous system lesions. Seventeen of the patients presented some neurological symptoms and signs and were selected for special study. The fundamental pathological change is the diffuse embolic meningoenephalitis; the types of lesions are pleomorphic, and no local area of the brain appears to be predisposed to injury; consequently the clinical features will vary considerably. Meningitis was the commonest manifestation, occurring in eleven of the cases. Neck rigidity and spinal fluid changes were present in all instances; opisthotonos and positive Brudzinski and Kernig signs were sometimes present. The cellular response in the fluid usually

showed a high percentage of polymorphonuclear cells, but lymphocytes and monocytes predominated in some cases. The organism could be recovered in cases of the acute type of bacterial endocarditis, but in the subacute variety the fluid was always sterile. Occlusion of a large cerebral vessel leading to hemiplegia occurred in eight cases, all of which were of the subacute type of endocarditis; meningitis was also present in three of these cases. Subarachnoid haemorrhage and psychosis with delusions of persecution were also noted. From these observations it was concluded that the presence of a sterile meningitis in an obscure febrile illness should suggest the possibility of a viridans endocarditis. The triad of clubbed fingers, splenomegaly and meningo-encephalitis is presumptive evidence of acute bacterial endocarditis in spite of the absence of signs of cardiac lesions.

Clinical Observations on the Effects of Peyote.

LEOPOLDO BARD (*Revista Médica Latino-Americana*, February, 1941) describes some of the effects of ingestion of extracts of peyote, a small cactus (*Zacateasis Hern*; also known as *Echinocactus williamsi* and *Anhalonium heroinii*). These effects are due to the contained alkaloids, of which the most important is mescaline. After an injection of mescaline sulphate several visual phenomena are noted. Coloured objects, when seen in a poor light, appear to have a preponderance of those colours associated with the short waves of the ocular spectrum; the combination of colour in objects is more delicate than that seen in nature. Sounds and noises may be associated with particular visual images; names of persons and notes played on the violin produce coloured geometric figures. A person under the influence of mescaline behaves according to his mental constitution or temperament: vagotonic persons behave differently from sympathetotonic ones. A superficial resemblance exists between the manifestations of mescaline intoxication and schizophrenia. Addiction to peyote is widespread among the Indians of Mexico and among certain tribes in the United States of America, and is intimately connected with religious cults.

Extrarenal Azotæmia.

MAURICIO MANGUEL (*Revista Médica Latino-Americana*, February, 1941) classifies extrarenal azotæmia under four main headings. The first is oliguric azotæmia, which includes (a) cases of increased arterial hypotension, (b) cases in which oedema due to retention of sodium in the tissues is present, (c) cases of dehydration due to gross loss of fluid, alteration in the acid-base ratio and hypochloræmia. Group (c) is observed in (i) high obstruction of the digestive tract, (ii) dysentery, cholera, severe colitis *et cetera*, (iii) intractable vomiting, and (iv) diabetic coma. The second main heading includes excessive urea production, seen in (a) hepatic hyperfunction, (b) gross destruction of the tissue proteins, and (c) obstruction of the lower urinary tract—urethra, bladder and ureters. The third heading includes azotæmia with hypochloræmia, seen after a prolonged salt-free diet, in cases of vomiting and diarrhoea and with suprarenal insufficiency. The fourth heading includes azotæmia without hypochloræmia, the rarest type of

extrarenal azotemia, seen in poisoning with strongly corrosive acids (sulphuric, carbolic et cetera). The diagnosis of this type of azotemia is made from the following factors: (i) a normal or increased urinary excretion, (ii) high specific gravity of the urine, (iii) the elimination of more urea than would be expected from the patient's regimen (due to an increased endogenous protein-katabolism—the kidney, although functioning normally, is unable to deal completely with the increased amount of urea so that the blood urea level rises), (iv) a decrease in urinary chlorides, (v) absence of albuminuria or, if present, in insignificant amount and without haematuria (except for an occasional red cell, due to congestion) or granular casts, (vi) increase of the urea nitrogen of the blood, (vii) a hypochloræmia related to the hypochloruria, (viii) a raised alkali reserve, (ix) dehydration of the tissues and an absence of oedema (except where an alteration of the serum-globulin ratio exists), (x) absence of correspondence between the amount of azotemia and the general condition of the patient, (xi) absence of the retinal changes of nephritis, (xii) resolution of the condition under the correct administration of chlorides. Treatment is that of the primary condition and the azotemia. For the latter, sodium chloride in hypertonic solution (10% to 20%) is given, 20 cubic centimetres at a time, three to four times a day. At the same time copious amounts of water are given by mouth or *per rectum*.

Auriculo-Ventricular Nodal Rhythm.

NATHAN FLAXMAN (*The American Journal of the Medical Sciences*, June, 1941) discusses auriculo-ventricular nodal rhythm and reports twelve cases of this cardiac arrhythmia. The author states that three conditions are necessary for the establishment of auriculo-ventricular nodal rhythm, namely, marked depression of the normal pace-maker of the heart and failure of any other part of the auricular muscle to assume this role, normal activity of the pace-making function of the auriculo-ventricular node, and ability of the impulse to pass backward from the functional tissue into the auricles to cause their contraction, that is, an absence of a state of reversed block. During the time that the auriculo-ventricular node is acting as pace-maker, the auricles respond to impulses from below and the ventricles to impulses above. Nodal rhythm has been observed in apparently normal hearts following auricular flutter due to atropine, digitalis, subacute bacterial endocarditis, coronary thrombosis, scarlet fever, quinidine sulphate, active rheumatic fever, anaesthesia, sulphanilamide and essential hypertension. The author states that there are no clinical cardiac features distinctive of nodal rhythm; the heart rate may be normal, slow or rapid, and there may be a major complaint of palpitation as a result of simultaneous contraction of the auricles and ventricles. The diagnosis can be made with certainty only by means of the electrocardiogram, in which it is indicated by the P wave, usually inverted, falling within or just after the QRS complex, the ventricular complex being normal in form. The author is of the opinion that neither digitalis nor quinidine nor any other special drug is indicated in treatment,

since nodal rhythm does not tend to persist after the cause has subsided or has been removed. Treatment, if possible, should be directed against the underlying cause, be it cardiac or extracardiac.

Pellagra.

RAFAEL A. BULLRICH (*Revista Médica Latino-Americana*, January, 1941) describes two cases of pellagra observed by him in Argentina. The disease is rare in that country, only eight cases having been described. Nicotinic acid, combined with brewer's yeast (30 to 150 grammes daily) and parenteral liver therapy is the treatment of choice. Orally, nicotinic acid is given in daily doses of 0.20 to 0.50 gramme up to 1.0 gramme; it is not as a rule necessary to exceed the dose of 1.0 gramme. By the intravenous route nicotinic acid may be given up to 0.20 gramme daily. Sydenstricker advises a daily dosage of 0.60 gramme for the first three days, followed by a daily maintenance dose of 0.10 gramme. Spleen and co-workers give doses of 0.50 to 1.0 gramme for five to six days. The toxic action of nicotinic acid is very feeble; up to 200 milligrammes may be given orally every day and 10 milligrammes intravenously. Dogs have received up to 1.0 gramme per kilogram weight, daily for eight weeks, without ill effect. The diethylamide of nicotinic acid ("Coramine") is as efficacious as the acid itself; 4 to 20 cubic centimetres daily is the recommended dosage.

Cardiac Lesions in Rheumatoid Arthritis.

A. H. BAGGENSTOSS AND E. F. ROSENBERG (*Archives of Internal Medicine*, February, 1941) have demonstrated cardiac lesions at autopsy in 20 out of 25 persons who had suffered from rheumatoid arthritis. Lesions identical with those of rheumatic fever were observed in 14; in only seven of these cases had signs or symptoms of heart disease been present during life. The authors suggest that a relationship exists between rheumatoid arthritis and rheumatic fever.

The Use of Sulphanilamide and its Derivatives.

PERRIN H. LONG (*Bulletin of the New York Academy of Medicine*, December, 1940) discusses the clinical use of sulphanilamide and its derivatives in the treatment and prophylaxis of certain infections. The problem as to which one of these compounds it is best to employ in a given infection is a real one, and hence it is imperative to know of their behaviour in the body. More is known of the fate of sulphanilamide in the human body than of either sulphapyridine or sulphathiazole, and when administered orally, sulphanilamide is well absorbed from the gastro-intestinal tract, is fairly well distributed throughout the tissues and, if kidney function is normal, is promptly excreted. The maintenance of adequate concentrations of sulphanilamide requires a dosage scheme that is on a four-hour basis. Sulphapyridine is irregularly absorbed by the same and different individuals, it is apparently fairly well distributed throughout the tissues, and generally it is conjugated to the therapeutically inactive acetyl derivative in a much higher

degree than is either sulphanilamide or sulphathiazole. Available data indicate that the liver plays the predominant role in the conjugation of sulphanilamide and its derivatives, that sulphapyridine is excreted more slowly than sulphanilamide or sulphathiazole, and a high percentage of the excreted drug is generally present in the urine in the form of acetyl-sulphapyridine, which conjugated fraction is poorly soluble and tends to crystallize out in the urine. Sulphathiazole is readily absorbed, and when kidney function is normal is rapidly excreted, and it is conjugated by the tissues in about the same degree as sulphanilamide. The author states that sulphathiazole is excreted so rapidly that the conjugating mechanism in the liver does not have time to play its ordinary role, except in cases in which the kidney function is depressed and the rate of excretion therefore decreased. This rapid rate of excretion makes it difficult at times to maintain adequate blood concentrations of sulphathiazole. There is little information available regarding the distribution of sulphathiazole in the tissues of the body, but it is known that it passes over much less rapidly into the spinal fluid than does either sulphanilamide or sulphapyridine, and therefore is less therapeutically efficient in meningitis than are the other two sulphonamides. The author states that in the selection of the drug for the treatment of a given infection it is important that the correct aetiological diagnosis of the disease process be made by bacteriological cultural methods, but that there should be no hesitation in using these chemotherapeutic drugs if it is considered, upon the basis of clinical diagnosis, that an infection is present which is known to respond to sulphanilamide or its derivatives, and in such case the early use of the drug is necessary to obtain clear-cut clinical results. In a series of tables the author has listed the drug of choice in the treatment of certain disease processes, the types of diseases in which the sulphonamides may be of some value, and the types of diseases in which they have been used without demonstrable value. He also tabulates the indications for the use of therapeutic serum in association with sulphanilamide and its derivatives, the indications for the possible peroral prophylactic use of these drugs, the dosage of sulphanilamide, sulphapyridine and sulphathiazole, the dosage of sulphathiazole in staphylococcal infections other than pneumonia, the dosage of sulphapyridine or sulphathiazole in the treatment of gonorrhoea in the male, the parenteral use of sulphanilamide and its derivatives, and the manifestations of drug toxicity noted in adults treated with these three drugs.

Dangers of Heparin in Bacterial Endocarditis.

S. SEVITT (*The Lancet*, April 5, 1941) reports the histories of two patients treated with heparin for bacterial endocarditis; one died from cerebral embolism and the other from pulmonary embolism.

C. M. FLETCHER (*ibidem*) reports the history of another patient treated with heparin for the same disease, who died of cerebral hæmorrhage. The author concludes that the treatment is ineffective and carries with it a risk of cerebral and other vascular accidents.

British Medical Association News.

MEETING OF THE FEDERAL COUNCIL.

A MEETING of the Federal Council of the British Medical Association in Australia was held at British Medical Association House, 135, Macquarie Street, Sydney, on September 22, 23 and 24, 1941, Sir HENRY NEWLAND, the President, in the chair.

Representatives.

The following representatives of the Branches were present:

New South Wales: Dr. George Bell, O.B.E., and Dr. W. F. Simmons.
Queensland: Dr. T. A. Price and Major M. S. Patterson (as substitute for Colonel D. G. Croll, C.B.E.).
South Australia: Sir Henry Newland, C.B.E., D.S.O., and Dr. A. F. Stokes.
Tasmania: Dr. C. Craig.
Victoria: Dr. F. L. Davies and Dr. H. C. Colville.
Western Australia: Dr. N. M. Cuthbert and Dr. F. W. Carter.
 Dr. C. Craig acted as proxy for Dr. S. Gibson.

Minutes.

The minutes of the previous meeting of the Federal Council of March 3 and 4, 1941, which had been circulated amongst members, were taken as read and signed as correct.

Annual Report of the Federal Council.

The annual report of the Federal Council for the year ended June 30, 1941, which had been circulated amongst members, was taken as read and received.

Finance.

Dr. George Bell presented the financial statement and balance sheet as at June 30, 1941. The statement, which included the Federal Council account and the Australasian Medical Congress (British Medical Association) fund account, was received.

Dr. George Bell submitted a statement setting out the probable income and expenditure for the ensuing twelve months, and moved that the *per capita* payment from the Branches for the following year should be six shillings, as at present. He explained that this amount would be necessary if the commitments of the Federal Council were to be met. The motion was seconded by Dr. W. F. Simmons and carried.

The Council also received the Federal national health insurance emergency account.

Returns under the Companies Act, 1936.

The General Secretary submitted the several returns necessary under *The Companies Act, 1936, of New South Wales*.

Letter from Dr. W. E. L. H. Crowther.

The General Secretary read a letter from Dr. W. E. L. H. Crowther, of Tasmania, acknowledging the receipt of a letter of appreciation from the Federal Council.

Request for Information Regarding Registration.

The General Secretary read a letter from Dr. Karol Zicher, from England, in which he asked regarding the possibility of his being allowed to enter Australia and of being registered. Dr. Zicher was of Polish nationality, held the degree of doctor of medicine of Milan, and was also a member of the British Medical Association. The General Secretary reported that a reply had been sent stating that the qualifications mentioned did not now allow registration to be effected in any of the Australian States, since the agreement with Italy previously existing in certain States in regard to reciprocal registration had been terminated since Italy had entered the war.

Request for information on a Proposed Scheme for a General Medical Service for Australia.

The General Secretary read a letter from Captain A. M. Thomson, asking for information on which he could base a paper regarding a scheme for a general medical service

for Australia. The General Secretary reported that he had replied to the effect that the scheme of the Federal Council was still in the drafting stage and that it would be advisable for Captain Thomson to study the scheme of the Parent Body published in *The British Medical Journal* of April 30, 1938.

Dispatch of Correspondence to the Western Australian Branch.

A letter was received from the Western Australian Branch requesting that all communications to the Branch from the Federal Council should be sent by air mail, and that copies of all correspondence should be sent to the secretary of the Branch and also to the Federal Council representatives. The General Secretary pointed out that it had never been the custom to send copies of all the correspondence to any representative of the Council, not even to the President.

Dr. F. L. Davies pointed out that there was a great deal of correspondence which it would not be necessary to send either to Branch councils or to Branch representatives.

The General Secretary agreed that it was quite unnecessary to send copies of all correspondence.

Dr. F. W. Carter pointed out that the trouble arose when a letter or a document was sent to Western Australia shortly before a meeting of the Federal Council. There was not then sufficient time for the Federal Council representatives and the members of the Branch council to become familiar with its contents before the Branch council met to discuss the particular problem.

The matter was left in the hands of the General Secretary, who said that he would bear in mind Dr. Carter's views.

Medical Officers' Relief Fund (Federal).

Dr. George Bell submitted the balance sheet and the trustees' report of the Medical Officers' Relief Fund (Federal) as at June 30, 1941. He said that on the whole things were going very well. Occasionally a beneficiary who had given a promissory note asked for an extension of time; but the others were all meeting their obligations fairly well.

Dr. F. L. Davies asked whether the fund was restricted to the relief of medical men in receipt of a war pension, and Dr. Bell replied that the trustees used their discretion. In certain circumstances it was possible only to use the surplus of income. A returned medical officer had not necessarily to be one who had sustained a physical injury during his war service; it was necessary that he should have suffered as a result of the war.

A Proposed Returned Medical Officers' Relief Fund.

At its meeting in March, 1941, the Federal Council had under its consideration the establishment of a returned medical officers' relief fund. On that occasion it was decided after discussion that consideration of the matter should be deferred. The subject was therefore brought up for discussion.

The President expressed the view that it was time that serious consideration was given to the establishment of such a fund.

Dr. F. W. Carter asked whether the Federal Council had any information regarding funds in the several States for the protection of the practices of members who were serving with the defence forces.

The President pointed out that there was no fund in South Australia. No fund had been established because only 57 out of a total of 400 members had agreed to contribute annually if necessary.

Dr. F. L. Davies said that in Victoria there were schemes apart from that initiated by the Victorian Branch. Of the 1,500 Branch members, under 200 had collaborated in the Branch scheme. The scheme was so devised that a beneficiary might have a total income of £900 a year. The plan had been devised for a five-year period, and he said that some of the contributors were experiencing difficulty in keeping up their payments.

Dr. F. W. Carter said that in Western Australia they had been able to collect the sum of £5,000. He thought that any further scheme that was put forward would not be a success and that all who could pay towards such an object were already paying.

Dr. George Bell said that schemes for the protection of the practices of absentee members varied in different parts of Australia. In the medical profession there were some who were naturally generous and others who were not. He thought that if a returned medical officers' relief fund was

established at the present time the contributors would come from among those who were already contributing to schemes for the protection of practices.

The President pointed out that the objects of a returned medical officers' relief fund would be somewhat different from those of a protection of practices scheme. The former would include widows and children as possible beneficiaries.

Dr. F. W. Carter said that in connexion with the Western Australian fund allowance had been made for widows and children.

Dr. W. F. Simmons pointed out that in connexion with the protection of practices scheme operating in the area where he lived, it would be possible to look after the widow of a deceased absentee until the equity in the practice was sold. He asked whether the Medical Officers' Relief Fund (Federal) was made by individual contributions or whether the contributions were allowed to extend over a period of years.

The General Secretary replied that contributions were made in the year 1918, during the latter stages of the war, and Dr. Simmons then expressed the view that the subject should be further deferred.

Major Mervyn Patterson said that the scheme already in existence in Queensland was liberal. For this reason it was thought that it would become top-heavy before very long and eventually insolvent. It made no provision for reconstruction after the war, and it was a fact that some of the beneficiaries were better off financially while they were away on active service than when they were at home. He thought that this was possibly a weakness in the scheme.

Dr. T. A. Price pointed out that under the schemes for the protection of practices no provision could be made for those who were outside such schemes. He wondered whether it would not be possible for members in the several Branches to agree to the payment of two guineas onto their subscriptions to establish a fund that would include not only those in need on account of war conditions, but others as well. Two guineas a year added to the subscription of members throughout Australia would make available a fund of £10,000 per year. Dr. Price thought that the Branches should be asked whether they would agree to this suggestion.

The General Secretary pointed out that such an arrangement was *ultra vires* the constitution of the Association. The funds of the Association could be used solely for the advancement of the medical and allied sciences.

Dr. H. C. Colville said that the initiation of an arrangement such as that suggested by Dr. Price would be an interference with the rights of the individual State Branches in regard to their subscriptions. Dr. Price's scheme would be impossible, because it would render necessary a Federal administration. The Federal Council had no jurisdiction over the amount charged as Branch subscriptions.

Dr. F. L. Davies said that it would be a waste of money to secure a legal opinion on this point, and Dr. George Bell agreed. Dr. Davies moved that consideration of the matter be deferred.

Dr. T. A. Price moved and Major Mervyn Patterson seconded an amendment to the effect that the Branches should be written to and asked whether they would be willing to raise their subscriptions by a sum of two guineas to provide a fund for the relief of members adversely affected by the war and by other circumstances. The amendment was lost.

Dr. Bell suggested that an addendum might be made to Dr. Davies's motion, that the views of the Branches should be ascertained in regard to the desirability of the establishment of a returned medical officers' relief fund, and how such a fund should be financed if its initiation was thought desirable. This suggestion was accepted and the motion for the deferring of further consideration was carried.

The Australasian Medical Publishing Company, Limited.

A Rebate to the Branches.

The General Secretary read a letter from the Australasian Medical Publishing Company, Limited, regarding the rebate to the Branches for the supply of THE MEDICAL JOURNAL OF AUSTRALIA to members on active service. The letter stated that the directors of the company had resolved to increase the rebate to the Branches for the year 1941 to the sum of 10s. for each member who as at December 31, 1940, had completely relinquished his practice for full-time continuous service with the armed forces.

On the motion of Dr. W. F. Simmons, seconded by Dr. George Bell, it was resolved that the thanks of the Federal Council should be conveyed to the directors of the Australasian Medical Publishing Company, Limited, for their generous action.

A Legal Agreement for the Supply of "The Medical Journal of Australia".

At the meeting of the Federal Council in September, 1940, discussion took place in regard to the Australasian Medical Publishing Company, Limited, and the supply of THE MEDICAL JOURNAL OF AUSTRALIA to members. As a result of this discussion it was recommended to the Branches that the Federal Council should make a legal agreement with the Australasian Medical Publishing Company, Limited, so that each member should receive THE MEDICAL JOURNAL OF AUSTRALIA.

At the meeting of the Federal Council in March, 1941, the General Secretary reported that this decision had been communicated to the Branches. It was resolved at that meeting that the Australasian Medical Publishing Company, Limited, should be asked whether it was willing to enter into an agreement with the Federal Council for the supply of THE MEDICAL JOURNAL OF AUSTRALIA. It was also resolved that if any agreement were made, it should provide that every member of the Association in Australia should be supplied with THE MEDICAL JOURNAL OF AUSTRALIA. It was also decided that THE MEDICAL JOURNAL OF AUSTRALIA should be designated the official organ of the British Medical Association in Australia. At that meeting also Dr. George Bell and Dr. W. F. Simmons were appointed a committee to deal with the Australasian Medical Publishing Company, Limited, for the drawing up of an agreement.

The General Secretary reported that the committee had consulted with the Federal Council's solicitors and also with the solicitors of the Australasian Medical Publishing Company, Limited, and that an agreement had been drawn up and circulated to members of the Federal Council.

Dr. H. C. Colville asked whether it was proposed to come to a finality about this agreement. The Victorian Branch wished to have the terms of the proposed agreement submitted to the several Branches before it was signed. The proposed agreement had not arrived in time for the Branch Council to discuss it.

The Federal Council then proceeded to consider the clauses of the agreement *seriatim*. One or two alterations were made, and it was resolved that the agreement should be sent to the directors of the company and that after consideration by the directors it should be sent with any emendations to the several Branch councils.

The National Health and Medical Research Council.

The report of the tenth session of the National Health and Medical Research Council, held at Canberra on May 29 and 30, 1941, was laid on the table.

The report of the eleventh session of the National Health and Medical Research Council, held at Canberra on July 24, 1941, was also laid on the table, and included with this was a copy of a statement prepared by Dr. F. G. Morgan, Director of the Commonwealth Serum Laboratories, on the value of protamine zinc insulin in the treatment of diabetes. The Secretary stated that the Victorian Branch wished to have Dr. Morgan's report published in THE MEDICAL JOURNAL OF AUSTRALIA.

Public Health Progress after the War.

The Federal Council had before it a copy of the recommendations of the National Health and Medical Research Council approved by it at its eleventh session on health administration and reconstruction after the war. These recommendations were published in THE MEDICAL JOURNAL OF AUSTRALIA on August 16, 1941, at page 182. The General Secretary stated that the document had been considered by the New South Wales Branch Council, which thought that it needed amending in many respects. The Victorian Branch Council had written to the effect that its delegates were empowered to express the Victorian views.

The President reported that he had had some correspondence with Dr. J. Newman Morris, the Federal Council's representative on the National Health and Medical Research Council, and pointed out that though the latter body might advise the Federal Government on matters of health, the unification of health services and so on, this did not commit the Federal Council or the Branches of the British Medical Association to accept its recommendations. He pointed out that he had instructed Dr. Newman Morris that he should not vote for any scheme which had not been agreed to by the Federal Council. The Federal Council was the only body which could speak for the Australian Branches of the British Medical Association as a whole in regard to questions of policy. The President also insisted that the Federal Council had to guard the rights of the practising members of the profession. At the same time, when Dr. Newman Morris, the Council's representative, asked for the official views of the Branches, these had to be given. Pointing out

that one member of the National Health and Medical Research Council had asked one of the Branch councils for its views, the President insisted that it was inadvisable for any Branch council to give its views, and that any transmission of these should be made through the Federal Council itself.

The General Secretary drew attention to the importance of the document that had been issued by the National Health and Medical Research Council, and said that the Federal Council could not pass it by. It was then decided that the document should be considered.

At this stage Dr. H. C. Colville asked whether the following item on the agenda paper, the planning of a general medical service for Australia, should not be considered at the same time as the National Health and Medical Research Council's report.

The President said that the two documents were obviously connected and it was the duty of the members of the Federal Council to make themselves thoroughly informed of their contents.

The General Secretary pointed out that the report of the subcommittee of the Federal Council on a general medical service for Australia dealt with a great deal of the material covered by the National Health and Medical Research Council report, in which, he insisted, there was nothing new.

Dr. H. C. Colville thought that to consider one scheme in detail would be to put the cart before the horse. The Federal Council should first of all decide on broad matters of policy. With this the President agreed.

Dr. T. A. Price said that there was more meat in the Federal Council's subcommittee's report than in the National Health and Medical Research Council's document. The Queensland Branch approved of the latter in general terms, but could not recommend its adoption until the methods envisaged by it were defined. Dr. Price pointed out that the National Health and Medical Research Council's document went to the Federal Government as the report of an official body, which included a representative of the British Medical Association. There was also another document which had been forwarded to the Federal Council, and this was one sent by the Victorian Branch council on a full-time national medical service; it was clear that some members of the Association had this kind of service in mind.

Dr. H. C. Colville explained that the Victorian Branch council had sent to the Federal Council some preliminary proposals for a salaried national health service for Australia. Dr. Colville wished it to be quite clear that this document had been drawn up by a subcommittee of the Victorian Branch council at the request of the council. It had not yet been brought before the full council. These preliminary proposals had been sent to the Federal Council, not in any way as expressing the views of the Branch, but merely because the Victorian Branch council did not wish any scheme such as that described in the Federal Council subcommittee's report to be implemented until some consideration had been given to the question of a salaried service. These preliminary proposals were sent at this stage really to prove the good faith of the Victorian Branch council in its request that the Federal Council should delay its decision.

Dr. W. F. Simmons said that it was impossible to avoid the discussion of the National Health and Medical Research Council document, if for no other reason, because members of the medical profession would in all probability have to give evidence before the select committee that was taking evidence in different parts of Australia on the problems of social security.

The Council then proceeded to discuss the National Health and Medical Research Council's document paragraph by paragraph. With many of the paragraphs the Federal Council was in entire agreement. It is not possible to publish this document again *in extenso*, and it is proposed therefore to indicate the more important points on which the views of the Federal Council differed from those of the subcommittee that had drawn up the National Health and Medical Research Council document.

Clause 6 in the original document read as follows:

The rapid development of medical practice along lines of specialized work has produced a complex of incoordinated activities all concerned with the care of individual health and each having direct or indirect relations with the others. All of these are becoming more and more divorced from the principles of prevention of disease. It is important that a proper administrative organization for bringing together all aspects of medical work be devised and incorporated in any system of social reform.

It was amended to read as follows:

An integrated national policy of health is urgently needed to secure coordination and cooperation.

In Clause 7 a sixth sub-clause was added, as indicating another major aspect to which regard had always to be paid in the application of the principles of the prevention of disease. The sub-clause was as follows:

The education of the people in all matters pertaining to health without which an improvement in the economic status would be of little value.

The Federal Council agreed that hospital services throughout the populated area of the Commonwealth should be arranged on a district hospital system, which might in suitable districts include a base hospital with subsidiary hospitals. These are the opening words of Clause 15. The Council was unwilling to go further than this and therefore omitted all subsequent words in the section.

In regard to Clause 16, the Council agreed that the problem of the sparsely settled districts should be provided for by a whole-time salaried service; but it did not think that the practitioners appointed to such districts should necessarily be young men. It therefore omitted the word "young" and made an alteration to indicate that such practitioners could either be on short-term service or be provided with adequate facilities for post-graduate study.

In discussing Clause 17, the Federal Council did not agree that the activities of State health departments enumerated were new developments. It therefore altered the clause so that it should read as follows:

It is considered important that the State health departments should, in cooperation with the practising profession, guide the following activities: (i) The age period between birth and school. (ii) School age and military training periods. (iii) Industrial life. (iv) Infectious diseases.

Clause 18 stood as follows:

This Council sees no insuperable difficulty in complete control by the Commonwealth, even including the transfer of State Health Departments, and in fact recommends as an ultimate objective such control or transfer with all aspects of preventive and curative medicine, including hospitals. On the other hand, the Commonwealth can profitably subsidize those activities. Any subsidy so granted should be conditioned in such a manner as to promote uniformity of legislation and administrative action throughout all the States.

The Federal Council recognized that complete control of health by the Commonwealth would need an alteration of the constitution. Several members expressed the opinion that the conditions in the several States differed from one another so widely that it would not be desirable to attempt their control by one body. The clause was altered so that it should read:

It is desirable that the coordination of medical services should be on a Commonwealth-wide basis.

In Clause 30, setting out the practical working difficulties under the national health insurance scheme, the following words appear:

The inequality of the load upon medical men will be difficult and will result in inefficient work by the busiest men so long as the panel system on a *per capita* basis is maintained.

The Federal Council substituted the following words:

Inefficiency is inherent in any system in which numbers are unlimited; consequently there should be limitation of the number of insured persons on a medical practitioner's list. This would necessitate reasonable conditions of service for medical practitioners.

In the sub-clause to Clause 30, words were inserted to the effect that every medical man working under an insurance scheme should, in addition to sufficient time for deliberate diagnosis and treatment, have at his disposal adequate access to pathological, X-ray and similar facilities as aids to diagnosis.

Clause 38 was altered to read as follows:

This Council suggests:

(1) that by evenly distributed payment spread over the whole community a complete and efficiently organized system of unified medical health and hospital services can be provided at a cost easily within the capacity of this community;

(2) that this can be done by a contributory system of payment and direct administration with the minimum of intervention of any third agency; any undue intervention is regarded as both unnecessary and also inevitably destined to confuse administration and to render the medical services less efficient.

In the original, Clause 41 stated that the recommendations were based on two main considerations, the first being that the growing child, in our present need, was the national

asset most worth preserving. The Federal Council considered that the words "in our present need" should be omitted, as the child was always a national asset worth preserving.

While agreeing with the second consideration—that the economic status of the individual was in the last analysis the determinant factor in health—the Council was of the opinion that each individual should be educated to provide for himself, but failing his ability to make this provision he should be provided by society with such essentials as the following: (a) enough food of the right kind; (b) freedom from financial stress while in hospitals, sanatoria *et cetera*; (c) freedom from financial stress while convalescent—this applied with especial force to women after childbirth; (d) easy access to good medical and hospital services; (e) proper housing.

In addition to the alterations here set out, one or two other minor or verbal alterations were made.

A General Medical Service for Australia.

When the Federal Council turned to the discussion of a general medical service for Australia, the President referred to the Parliamentary Select Committee on Social Services, which is taking evidence throughout Australia on the subject of social security. The medical profession might be called upon to give evidence, and it was therefore important that the Federal Council should consider what its views were. Broadly speaking, there were three possible forms of service. The first was a continuation of the present arrangements, in which medical practitioners engaged in private practice and the health departments carried out their official duties. The second form might be characterized as contract practice with some modifications, both of private practice and of the health services. The third form was a salaried whole-time medical service. The third form was the aim of certain persons, and it was held that after the war many members of the profession at present serving overseas would come back to Australia and would be glad to become members of a salaried service. With all three methods it was possible to elaborate a service which would be effective and at the same time do full justice to the doctor and give every satisfaction to the patient. The Council had to decide whether it would consider all these aspects of practice or not. The President thought that all aspects should be discussed.

Dr. F. L. Davies said that the different forms might give satisfaction to doctor and to patient. He thought that the profession should have a scheme like that set out in the Federal Council subcommittee report, and that it should also consider a scheme of whole-time service. At the present time the Federal Council did not know what the profession wanted nor what it would be offered.

Dr. George Bell thought that the various schemes should be considered and weighed. The Federal Council carried a motion to this effect moved by him, and the Council then considered the Federal Council subcommittee report in detail.

The report as finally adopted by the Council is set out in *extenso* below. The chief criticisms of the report as originally submitted came from the New South Wales, Queensland and South Australian Branches. A number of suggestions, particularly from Queensland, were purely verbal alterations and were made with the idea that their adoption might make the report simpler for the non-medical person to understand. The report was considered clause by clause.

Clauses 1 to 4 were accepted without amendment. In Clauses 5, 6 and 7 verbal alterations were made. Clauses 8 and 9 were accepted. In the discussion on Clause 10 it was pointed out that adequate medical supervision and control were especially necessary in radio discussions on health matters. Reference was also made to the Federal Council's efforts in previous years to induce the minister responsible to take suitable action. Clause 11 was accepted.

In regard to Clause 12, the South Australian Branch offered as a criticism the statement that the compulsory inclusion of everyone brought into the scheme many who were not and could not be included in friendly society contracts. It was thought that this should be borne in mind when a reasonable capitation fee was being determined, and when the present contract practice rates were used as a basis for calculation. Clauses 13 to 19 were accepted. In Clause 20 the inclusion of almoners was suggested by both the New South Wales and the South Australian Branches and accepted. Clause 21 was accepted.

Clause 22 provided a good deal of discussion. Dr. T. A. Price thought that to insist on an income limit would be to cripple the system. After the war so few persons would be able to pay full fees that it would be foolish to insist on an income limit. He had been at some pains to discover that in all probability after the war was over only 2% of

persons in Australia would have a taxable income of more than £500 a year.

Dr. George Bell said that Sir Henry Morris-Jones, when visiting Australia, had told him that it was more than likely that the income limit under the national insurance scheme in Great Britain would be increased to £500. The General Secretary pointed out that, from recent statements in *The British Medical Journal*, the increase would be up to £450, and that the Ministry of Health proposed to offer the profession an increase of sixpence in the capitation rate, bringing it to 9s. 6d., for the inclusion of those persons with incomes between £250 and £450.

The General Secretary then went on to say that in this matter it was necessary to consider both the patient and the doctor. It was also necessary to keep in mind the conditions that were likely to be offered by the powers that be. The members of the profession in Australia would be vitally interested, and in schemes drawn up by the profession regard should be paid to practical offers that would be made to it.

Dr. T. A. Price said that if they went to the public with a service for all, they would secure far better terms. With an income limit a service would be regarded as a concessional service. He agreed that they ought to be sure that the doctor would receive reasonable payment for his services. Their cause, however, would be much stronger if they had no income limit. At the same time he thought that a man should be free to go to a private doctor if he wished to do so. At this point several members explained that if a medical service such as that envisaged in the report came into being and there was no income limit, there would be no private practitioners to whom members of the community could go. All medical practitioners would be in the scheme. It was pointed out that in Great Britain no panel practitioner could treat as a private patient any person who was on the panel of another practitioner. In reply to an interjection by Dr. F. L. Davies that the Queensland system of lodge practice had fallen down on its formula, Dr. Price objected that this was not the case. He gave details of the automatic increase of the *per capita* payment for lodge practice from 24s. to 27s. 6d., and explained that the dropping of an extra sixpence was done by mutual agreement, and that the medical profession of Queensland was pleased and well satisfied with the cooperation that existed between the members and the friendly societies.

The General Secretary pointed out that the Victorian friendly societies had recently denied that friendly society service was a concessional service. He then stated that some members of the profession had ideas somewhat similar to those of Dr. Price, and had submitted to him a scheme for the provision of a complete medical service, including midwifery, operations and specialist services, the charge for which for a family unit would be about £6 10s. *per annum*. The question to be asked, he added, was whether this was practicable.

After some discussion the question was raised as to whether the subject should be deferred for discussion later on during the meeting, and it was decided not to adopt this course.

Dr. H. C. Colville thought that side issues were being drawn into the discussion. Despite Dr. Price's contention that only 2% of the population would be able to afford private fees, it was the experience of everyone that private medical practice was a well-developed enterprise. There were many persons in the community who would be unwilling to forfeit the right to make their private arrangements. Private practice was valued by many persons, and their rights and opinions should be considered. What had to be decided was whether nationalization of the profession should take place or whether private practice was a good thing and whether a salaried medical service should be provided for those to whom a proper medical service was now lacking. Dr. Colville insisted that the discussion lay on these lines.

The President expressed the opinion that the patient should be free to choose what form of service he would have.

Dr. A. F. Stokes said that if an income limit was omitted the principle of nationalization was accepted. An income limit was necessary.

Dr. T. A. Price saw no reason why it would not be possible to have freedom of choice by the patient, even if all practitioners had lists. The members of the community would be allotted to the practitioners of their choice, but it should be possible for them to go as private patients to someone else if they wished. He did not see why the English system should obtain in Australia. The patient should have the right to go to another panel doctor as a private patient.

On the motion of Dr. F. L. Davies, seconded by Dr. H. C. Colville, Clause 22 was adopted.

Clauses 23, 24 and 25 were adopted, Clause 24 with a verbal alteration. In regard to Clause 26, some time was devoted to the discussion of the amount to be stated as income limit. The Western Australian Branch thought that the proposed sum of £312 was too low and that it should be £400. The South Australian Branch had expressed the view that it was difficult to decide on an income limit at the present time; it was better to agree on the principle and later on to decide on the actual amount. With this Dr. H. C. Colville agreed. In reply to a statement of the President that some practitioners failed to observe the income limit clause of the lodge agreement, Dr. F. W. Carter said that this was because the onus was on the doctor. The onus should not be on the doctor, for he became a marked man in friendly society circles if he did object. The General Secretary pointed out that at the present time private practice worked out at about 8s. per service and contract practice on an average at about 2s. 6d.

Dr. T. A. Price thought that the income limit should be £500. After further discussion it was resolved on the motion of Dr. F. W. Carter that the income limit should be £416.

Clause 27 was adopted.

In regard to Clause 28, some discussion took place on the words in the original draft of the scheme "that consultant and specialist services should be available only on the recommendation of the family doctor". The view was expressed that some practitioners might refuse to have a consultant. Again it was stated that the patient should have the right to ask for a consultation, and at the same time it was thought that if he knew he could have one he might ask for a consultation too often. Dr. H. C. Colville did not think that refusal should be considered; but the General Secretary stated that it did occur. It was then decided to omit the word "only". Some verbal alterations were made to the remainder of the clause.

Clause 29 was adopted.

Some discussion took place on Clause 30, which, however, was adopted as it stood. Dr. C. Craig referred to the words "representative committee of medical practitioners", and wanted to know who would decide the personnel of such a committee. The committee would need to be impartial, and possibly some jealousy might be caused when appointments were made to it. With this Dr. A. F. Stokes agreed. He put the South Australian view that the clause should be adopted as it stood; the question was only one of organization and machinery. Dr. Craig said that in the future it would be necessary to insist that specialists should have a higher degree. Dr. N. M. Cuthbert thought that there should not be a non-medical person on such a committee.

Clauses 31 to 36 were accepted, a verbal alteration being made in Clause 32.

In Clause 37, as originally drafted, was a statement which favoured the delivery of pregnant women in their own homes, provided they were well equipped, rather than in hospital. Dr. H. C. Colville said that this view was debatable and was contrary to the opinion of members of the Victorian Branch. The Victorian members thought that any attempt to increase the number of confinements conducted in the patients' homes would be a retrograde step. The education of the public had all been in favour of hospital treatment.

Dr. A. F. Stokes said that South Australian opinion agreed with this.

Dr. F. W. Carter said that Western Australia did not think the private home should be regarded as the ideal place for delivery.

On the motion of Dr. George Bell the contentious words were deleted.

Words having a somewhat similar bearing were deleted from Clauses 38 and 39.

During the discussion of Clause 40 several members of the Council emphasized the importance of a post-natal examination of the mother. Members also agreed with the insistence of the New South Wales Branch on the inclusion of words dealing with the provision of "home help" who would relieve the mother during her lying-in period.

Clause 41 was adopted with verbal alteration, and Clause 42 as it stands is a New South Wales Branch amendment of the clause as it originally stood. Clauses 44 to 47 were accepted.

Some discussion took place in regard to Clause 48. Dr. T. A. Price moved and Major M. Patterson seconded a motion stating in effect that the day of the honorary system of hospitals had gone, and that therefore it was no longer necessary. The motion was not carried.

Clauses 49 and 50 were adopted, Clause 49 with a verbal amendment.

Since "pay beds" in hospitals no longer existed in Queensland, a clause making reference to them was deleted. Clauses 51 to 60 were adopted, in one or two instances with slight verbal alterations.

A communication was read from Dr. C. R. D. Brothers, of the Mental Hospitals Department of Tasmania, dealing with the question of research in psychological medicine. It was pointed out that in a general way the matters mentioned by Dr. Brothers were already included in the report as adopted.

Dr. H. C. Colville suggested that the method of payment of practitioners should be considered. He moved a motion to this effect; it was seconded by Dr. F. L. Davies and carried.

Dr. George Bell, in reply to Dr. Colville, said that the method of payment of practitioners had been purposely omitted from the report, as it was thought that general principles should be considered first of all. He pointed out that three possible methods were available: (a) payment by salary, (b) payment by means of a capitation rate, (c) payment for each service rendered. So far the New South Wales Branch had not come to a decision in the matter. It was Dr. Bell's impression that the New South Wales practitioner thought about the subject in terms of general practice as at present conducted.

On the motion of Dr. N. M. Cuthbert a resolution was adopted stating that in general practitioner services payment should be on a *per capita* rate, except in such areas as required a whole-time service. Dr. Cuthbert said that it was difficult to amplify the terms of the resolution. He thought that a salaried service was likely to take away from the efficiency and prestige of the profession. If a salaried service was adopted, it was clear that the medical profession would in time have to agree to a national service. A salaried service was quite acceptable at the present time in sparsely populated districts.

Dr. W. F. Simmons said that for specialist services some fund would have to be available. He could not visualize a full-time salaried service being workable for specialists.

In reply to a question by the President regarding the proposed payment under the New Zealand system of payment for services rendered, the General Secretary said that a practitioner would receive 6s. for each consultation at his house and 6s. 6d. for each visit.

The General Secretary pointed out that if payment was made for each service rendered, a great deal would depend upon whether the payment were being made out of a pool, and also on the size of the pool and whether it was fixed or not. He thought it was much better that payments should be made on a *per capita* basis if the pool was fixed, and this in effect had been found in England.

Dr. H. C. Colville said that in these circumstances a salaried basis would be satisfactory; but the General Secretary pointed out that it was extremely difficult to know how much a man's services were worth.

On the motion of Dr. T. A. Price, seconded by Dr. C. Craig, it was resolved that a limit should be placed on the number of persons to be allowed on the general practitioner's list. It was also resolved that payment for specialists should be (a) by part-time appointment, (b) by payment for each service rendered, (c) by a combination of both methods.

At this stage the Federal Council started to consider in detail the preliminary proposals drawn up by a subcommittee of the Victorian Branch for a salaried national health service. It was made quite clear that this document did not represent the views of the Victorian Branch, but had been forwarded to show that the Victorian Branch did not wish to have any plan implemented until some consideration had been given to the question of a full-time salaried service. When the Council began to consider in detail the proposals of a full-time service, it was clear that it had already decided against some of the basic principles of such a service. Further consideration of the Victorian subcommittee's document was therefore abandoned.

Dr. F. L. Davies then repeated the request of the Victorian Branch council that the Federal Council subcommittee's report should not be implemented until other schemes had been put forward. Dr. H. C. Colville said that it was only a request for the Federal Council to hold its hand. After discussion, in which several members took part, it was resolved, on the motion of Dr. N. M. Cuthbert, seconded by Dr. T. A. Price, that the Federal Council subcommittee's report should be adopted as the policy of the Federal Council. The President asked whether this was a final adoption, or whether the report was to be returned again to the Branches. Dr. H. C. Colville asked for an explanation of what the word "adoption" meant, and Dr. N. M. Cuthbert replied that he had intended that the report should be sent to the Branches for their information. The Federal Council subcommittee's report is as follows.

I. The Problem.

1. "Health is a precious possession, so precious that one does not ordinarily set a money value upon it. It is not exchanged in the market place. It is personal and intimate, something cherished for the pursuit of happiness."

An efficient health service is essential to the welfare of every progressive nation. The principle that a health service should be complete and available to all citizens is supported by modern developments in medicine, by the universal trend towards cooperative social effort and by the better standard of physical fitness required for national survival in the highly competitive world of today.

2. The past thirty years have been characterized by a widening and a deepening of the public interest in the problems of personal and public health. The establishment of the systematic medical examination of school children, the organization of tuberculosis, venereal disease, maternity and child welfare, mental and mental deficiency services, and the development of the public hospital system, all illustrate the greatly increased interest which the community, through the State, has manifested in health and sickness provision as a form of social service. The Press, the radio and the public platform have combined to keep continually before the public as a live and personal issue "The Health of the People".

3. The existing health agencies are different in their origin and inspiration and diverse in their form. The State, which forty years ago confined its interest in national health exclusively to the protection of the community from the ravages of infectious disease and the abatement of the grosser dangers to communal health, began in the early years of this century to interest itself in personal health services. In particular it has made forms of provision for the mother and the infant, the school child, and for those of all ages who are suffering from certain diseases or defects or who need institutional treatment. The public hospitals, born of humanitarian motives and intended mainly to serve the poor, now minister, with State aid, to a section of the community which is, in the great majority of cases, neither destitute nor poor. The services of the private practitioner are available to all sections of the community on an individual fee-paying or capitation or charitable basis. Different services have been established at different times by different agencies with different motives.

4. The State continues steadily to increase and extend its health and sickness activities. But it cannot be said that each new development is an expression of a unified health policy of ordered development. Still less can it be said that the State, in creating new facilities or services, invariably takes steps to ensure a close correlation with parallel non-State or voluntary provision. The result has been piecemeal and fragmentary growth rather than consistent and systematic development. The public is often served by unrelated and competitive agencies. The individual passes from consulting room to clinic or hospital, from private to official doctor and often back again, to obtain from many unrelated agencies a service which could be more efficiently provided as one coordinated whole.

5. A properly planned health service is urgently needed to secure coordination and cooperation. The British Medical Association, representing the great majority of doctors in this country, has constantly studied in principle and in detail many aspects of this subject. As an outcome the Association now submits for the consideration of the public a coherent and inclusive scheme of medical service based on a few simple basic principles. The plan of medical provision which the Association advocates is one that would ensure for all who need it every kind of treatment available for the cure of the sick and prevention of disease, and would utilize for this purpose every class of medical practitioner. It is in accordance with the belief and traditions of the medical profession and would have its whole-hearted support.

II. General Principles.

6. The main basic principles of the scheme are four in number:

(i) That the system of medical service should be directed to the achievement of positive health and the prevention of disease no less than to the relief of sickness.

(ii) That there should be provided for every individual the services of a general practitioner or a family doctor of his own choice.

(iii) That consultants and specialists, laboratory services, and all necessary auxiliary services, together with institutional provision when required, should be available for the individual patient, normally through the agency of the family doctor.

(iv) That the several parts of the complete medical service should be closely coordinated and developed by the application of a planned national health policy.

7. The system of medical service should be directed to the achievement of positive health and the prevention of disease no less than to the relief of sickness.

Health is something more than the absence of disease. While provision for the treatment of disease is an essential part of any satisfactory health service, the emphasis should rest on the positive prosecution of measures to maintain and enhance mental and physical health.

8. This first principle not only satisfies the demands of enlightened public opinion, but it accords with the spirit and trend of modern medicine. Recent years have been characterized by a reorientation of medical thought and a widening of the basis of medical practice. Whereas, until comparatively recently, medicine found its sanction to a large extent in the sciences of pathology and morbid anatomy, it now approaches the problems of health and disease from the standpoint of applied biology, concentrating not only on the causes and treatment of disease in its individual manifestations but on the promotion and maintenance of positive health. It views the individual not as a vehicle of disease processes, but as a living organism adapting itself to its environment.

9. By continuous attention to such factors as housing, water and food supply, the prevention of epidemics, and the prevention or abatement of conditions injurious to health, the services administered by local authorities ensure a standard of environmental circumstances which is vastly superior to anything which existed comparatively few years ago. There is no room for complacency, however, for much remains to be done. The nutritional standards of some of our people are too low; such a valuable food as milk is by no means universally safe; facilities for recreation are commonly inadequate; bad housing and overcrowding exist; and preventable infectious disease still occurs all too frequently.

10. There are signs of a new public interest in the more positive aspects of health. There are signs of improved technique in health education; it is directed more to healthy living and less to particular diseases. Biology and elementary hygiene are being taught more effectively in the schools, while the Press, the poster, the pamphlet, the film, and—potentially the greatest of all—the radio, are all contributing to health education, but need adequate supervision and control.

11. But the value of all these contributions can be greatly enhanced by the work of the family doctor. Because of his intimate knowledge of the homes and lives of his patients he has unrivalled opportunities of advising on wise and healthy living. This is made possible, however, only when a family doctor is within easy reach of every citizen and when every citizen avails himself of the advice and help that his doctor can give.

In the modern conception of medical practice great emphasis is placed on the role of the family doctor as health adviser. Owing to the advances of scientific knowledge many specialisms have developed, and there is nothing to suggest that this movement will be less rapid in the future than it has been in recent times. On the other hand, there have emerged a growing public appreciation of the value of health and of the importance of early attention to departures from normal and a demand for the services of the general practitioner as health adviser. This movement is bound to develop rapidly, and the national policy for the promotion of the health of the people should be so framed as to encourage it. The role of health adviser by the family doctor is a natural development of ordinary medical practice, and the training of the student of medicine should be adapted to fit him for it.

12. There should be provided for every individual the services of a general practitioner or a family doctor of his own choice.

It is of primary importance that the organization of the health service of the nation should be based upon the family as the normal unit, and on the family doctor as the normal medical attendant and guardian. It is not for disease or diseases in the abstract that provision has to be made, but for persons liable to or suffering from disease. The first essential for the proper and efficient treatment of individual persons is, therefore, not institutional but personal service, such as can be rendered in the homes of the people only by a family doctor who has the continuous care of their health, to whom they will naturally turn for advice and help in all matters pertaining thereto, who will afford them such professional services as he can render personally, and who will make it his duty to see that they obtain full advantage of all the further auxiliary services that may be otherwise provided.

13. The general practitioner has undergone the same training before qualification as all other members of the medical profession, and has usually supplemented it with

hospital and other experience before adopting general practice as his chosen branch or department of medicine. His services are used to the best advantage only when he is general health adviser as well as medical attendant in sickness. He is in the best position to advise generally on matters relating to health, to take into account domestic circumstances and environment, and to discover as early as possible when departures from the normal have occurred. It is to him that the public should naturally look for advice and help in efforts to increase or maintain health, for early diagnosis and treatment, and for reference to agencies providing special services.

14. It is interesting, too, to note the conclusion on this subject formed in England by an independent research body, Political and Economic Planning, which issued a comprehensive survey of health services in that country in 1937.

The needs of the individual or family in health matters vary so very much, and call for so much experience and judgement that they can in practice only be intelligently and sympathetically determined by a person inside the health services who is acquainted with the medical record and the environment of the person requiring attention. In other words, only the general practitioner can keep track of the resources of the health services on the one hand, and the peculiarities and needs of the individual "consumer" of health services on the other.

15. The value of a family doctor to his patient is immeasurably increased where complete confidence exists. Few conditions of ill health are without an underlying psychological factor, and if the relationship between doctor and patient is impaired by suspicion or lack of confidence the doctor is less capable of fulfilling his role of adviser and healer, and the patient is less likely to enjoy the full benefit of his doctor's capacity and desire to help him. For this reason the interest of the public demands that free choice of doctor should be the right of every citizen, whatever his social position or medical need.

16. The specialist in medicine is the complement of the family doctor and not a substitute for him. To short-circuit the family doctor is uneconomic, bad for the patient and bad for the medical profession. The average member of the public is not fully competent to choose the specialist he ought to consult—assuming that he needs to consult one at all. Selection without guidance is uneconomic. Even if the patient happens to be right in thinking he needs the services of a specialist, and is doubly fortunate in choosing the right one, he cannot obtain full value for his expenditure of time and money if he goes to the specialist unprovided with the valuable information the family doctor can give—information as to physical and mental characteristics, family history and previous personal history, and as to what methods of treatment have already been adopted. These considerations apply whether the individual patient seeks treatment at a clinic, a hospital or privately.

17. Consultants and specialists, laboratory services and all necessary auxiliary services, together with institutional provision when required, should be available for the individual patient, normally through the agency of the family doctor.

The work of the family doctor must be supplemented by the provision of specialist aids for diagnosis and treatment with regard to specific points or in special circumstances. The increasing complexity of medical science has been accompanied by the development of a considerable number of special methods and techniques, both in diagnosis and in treatment, the successful employment of which involves specialized knowledge and experience, and, in many cases, complex and expensive apparatus.

18. The second opinion or consultation, with or without treatment, must be available. It may be sought from the general physician, the general surgeon, the obstetrician and gynecologist, or from a specialist in a more restricted field. Again, the help of a practitioner specializing in a particular method or group of methods of diagnosis or treatment, such as a pathologist, a radiologist, or a practitioner concentrating on physical or on psychological methods, may be desired. These, too, should be available. Such consultant and specialist provision should be available in the home, the consulting room, the clinic, or the hospital, according to the circumstances. In short, all classes of special knowledge and specialized technique should be available when the circumstances require them for every member of the community.

19. The work of the medical practitioner, whether he be general practitioner or specialist, often needs to be supplemented by contributions from those not medically qualified. In a special class come the services of the dental surgeon, whose work constitutes one of the most important departments of preventive and curative medicine. Whether he acts

as an independent practitioner or in conjunction with the medical profession, he is a necessary part of a complete medical service. It is essential to the completeness of the scheme here proposed that arrangements be made by the community with the dental profession for a comprehensive dental service.

20. The principal auxiliary services are those provided by almoners, pharmacists, nurses, midwives, masseurs, radiographers, dispensing opticians and medical electricians. The conditions of employment are, first, that all persons so employed shall have been properly trained and found capable of giving the required treatment, and secondly, that no treatment shall be undertaken by such auxiliaries except on the recommendation, and under the responsible care, of a qualified medical practitioner. It is necessary that the medical profession and the public should know that persons to whom important, though auxiliary, methods of treatment are entrusted, are competent; and it is equally important that it should be clearly understood that no person without a complete medical training (however well trained he or she may be in the particular service which he or she provides) is competent to assess the bearing of the special line of treatment on the case as a whole. The essential preliminary to any rational form of treatment is a thorough examination of the patient by one properly and completely trained in medical science. Diagnosis is an art sufficiently difficult even to those prepared by this training. Half-knowledge is often misleading and sometimes dangerous. The State registers of nurses, midwives and pharmacists provide the necessary machinery for making available to the medical profession the services of those who are satisfactorily trained in a branch of medical auxiliary work.

21. The several parts of the complete medical service should be closely coordinated and developed by the application of a planned national health policy.

Two of the more important criticisms which are directed at modern health services are, first, that with certain striking exceptions there is little evidence of cooperation between the various health agencies, and secondly, that their development has been piecemeal, sporadic and fragmentary. An immediate remedy is the development of adequate consultative and advisory machinery and, in particular, of machinery to ensure consultation between State authorities and the practising profession of their areas. A permanent solution, however, can be reached only by making complete the medical provision available to the people, by including in the arrangements statutory provisions for consultation between the administrative authority and the medical profession, and by basing subsequent developments upon a systematic and coordinated plan.

III. The Plan.

22. The features which, in the opinion of the Association, are essential to a complete medical service have been set out; the next important question is how the service can be provided for that large section of the community comprising persons who are not able to provide it for themselves in times of sickness because of the increasing cost of medical care and also because such costs are uncertain and irregular. This, obviously, is not a medical question, but it is one to which the Association has given much consideration.

23. The frequency of sickness and the costs of medical care are predictable for a group of people but not for an individual. Consequently, if the costs of medical care are not to be burdensome, they must be distributed amongst groups of people and over periods of time. Insurance is the method by which modern organized society protects itself against hazards, such as sickness, accident, invalidity and unemployment.

24. Health insurance is a practicable method of providing a complete general medical service. Whilst it is true that it really forms part of the larger field of social insurance, health insurance should be regarded from the great national aspect of the prevention and cure of disease. It is impossible to combine in one measure a huge financial system of cash benefits and an equally vast organization of professional men. Health insurance should be completely divorced from any scheme for the provision of cash benefits, such as sickness benefits and pensions.

The Royal Commission on National Insurance, in its report which was issued in 1926, stated, *inter alia*: "Your commissioners . . . after reviewing the reports of the experience of other countries, are of the opinion that it is not desirable that these provisions [health] should be included in any scheme providing for financial benefits, but that they should be dealt with under a national health scheme which, although closely related to the objects of a national insurance fund, can be more effectively dealt

with it dissociated from the administration of the financial benefits. Where medical benefits have been administered under a scheme providing for cash benefits also, they have invariably been limited and have proved inadequate, while the increasing cost of the former has had a detrimental effect upon the provision of the latter."

25. During the past hundred years the friendly societies, with the assistance of the medical profession, have built up a great system of voluntary health insurance which provides a fairly complete general practitioner service for about a quarter of the population. Within its limitations the service given to friendly society members is of a high order. But a great weakness, and this may be said of all voluntary schemes of insurance, is its incompleteness and inadequacy—it does not provide shelter against "the slings and arrows of outrageous fortune" for those who most need it. No insurance scheme can be regarded as satisfactory which does not provide a complete medical service and which excludes from its provisions the unemployed and unemployable.

26. *The Availability of the Service.*—Unless a plan is compulsory it defeats the insurance principle of spreading the risk over the entire group. Consequently all persons, with or without dependants (children up to 16 years), having an income of less than £416 per annum should be included in the plan.

Although it has been assumed to be a responsibility of the medical profession, the medical care of the indigent is a communal one. There is no reason why the medical profession should alone bear the burden of providing one of the necessities of life. It is clearly undesirable that the method of medical provision for the poorest section of the population should differ from that enjoyed by the community generally.

27. *General Practitioner Services.*—The general practitioner can give adequate and satisfactory medical service to upwards of 80% of all those requiring it. The actual content of the general practitioner service would require to be clearly defined, but in general it would comprise all proper and necessary medical services other than those involving the application of special skill and experience of a kind which general practitioners as a class cannot reasonably be expected to possess.

28. *Specialist Services.*—It is proposed that the consultant and specialist service should be comprehensive and include all necessary facilities in medicine, surgery, obstetrics and their special branches, as well as pathological and radiological services. It is suggested that the consultant and specialist service to be made available should be defined as such examination as can be made at a single consultation, together with the furnishing of a report, when necessary, for the information of the attending practitioner. The service should be identical with that now available to private patients, and would be rendered as a rule in the consulting room of the consultant or in the home of the patient. Although the approach of the patient to the general practitioner should be direct and free, it is essential, in the interest of the patient, that consultant and specialist services should be available on the recommendation of the family doctor. The services in tuberculosis and venereal disease and infectious diseases, where provided by State authorities, should continue as special services coordinated with, but not necessarily merged into, the main consultative arrangements.

29. When a general practitioner decides that a consultation is desirable he himself should make the necessary arrangements with the consultant. If he is unable to be present at the consultation he should furnish a written report to the consultant, who, after the consultation, should report to the general practitioner. If the consultation takes place at the patient's house the attending general practitioner will normally be present.

30. *Personnel for Specialist Services.*—It would be necessary to establish lists of consultants and specialists who satisfy a certain standard of eligibility and who desire to render service under the scheme. Before becoming eligible for inclusion on the lists the practitioner should satisfy a representative committee of medical practitioners that:

(a) He has held hospital or other appointments affording special opportunities for acquiring special skill and experience of the kind required for the performance of the service rendered, and has had actual recent practice in performing the service rendered or services of a similar character; or

(b) He has had special academic or post-graduate study of a subject which comprises the service rendered, and has had actual recent practice as aforesaid; or

(c) He is generally recognized by other practitioners in the area as having special proficiency and experience in a subject which comprises the service to be rendered.

31. All practitioners satisfying one or more of the criteria (a), (b) and (c) should be eligible to have their names

included in the lists. In the published lists the names should be divided into two classes: (1) those practising exclusively as consultants or specialists; (2) those not practising exclusively as consultants or specialists.

32. *Doctor and Patient.*—It is appropriate to refer here to certain general features of medical service to which the medical profession, in the interests of the public, attaches great importance.

(a) That the interposition of any third party between the doctor and the patient should in the latter's interest be as limited as possible.

(b) That, as far as is possible, responsibility should be placed on the medical profession itself for the control of the purely professional side of the service, for the maintenance of the highest possible quality of service, and for the discipline of practitioners taking part.

(c) That the organized medical profession should be constituted on all professional matters by those responsible for the administrative and financial control of the service.

33. In the first place, the relations between doctor and patient are so intimate that both doctor and patient rightly resent any outside interference. Such interference is bad for the doctor and worse for the patient. It is bad for the doctor because his whole training and the traditions of his profession tend to foster the idea of personal responsibility, and this can be undermined only at the risk of rendering the doctor less efficient. It is worse for the patient because, *ex hypothesi*, he or she is a sick person whose cure depends very largely on complete confidence in the doctor, and this confidence is built up to a great extent on psychological factors which are disturbed by the intrusion of outside agencies. The poorer sections of the community should have the same consideration in this matter as is demanded as a matter of course by the more wealthy sections. The patient should be able to feel that the doctor is his doctor, acting whole-heartedly and independently on his behalf, and without other relationships which tend to become paramount.

34. Experience has shown that the interests of the public are best served in any organized medical service by putting as much responsibility as possible on the doctors giving the service—responsibility, that is, for the quality of the service and for its smooth working. There are no severer critics of delinquent doctors than their own colleagues invested with the control of purely professional affairs. And there is no surer way of securing an efficient service than to enlist the active interest of those whose reputation as a profession is involved in the manner in which they exercise collective responsibility entrusted to them.

35. *Maternity Services.*—The problems of maternity, and in particular maternal mortality, have received a great deal of public and professional attention in recent years. Nevertheless, there has been no substantial change in the rate of maternal mortality and little progress towards the establishment of a complete maternity service. The main defect has been that, while each development deals with some aspect or phase of the problem, there has been no concerted effort to deal with the problem as a whole. In the view of the Association, what is needed in the interest of the mother is the establishment of a national maternity service based upon the principle of continuity of medical and nursing care throughout pregnancy, labour and puerperium. The present system, under which it frequently happens that a woman receives her ante-natal care at the hands of one practitioner, is confined by a midwife, and, in the event of an emergency arising, is then attended by a practitioner who is without previous personal knowledge of her pregnancy, should be replaced by one in which every woman is, throughout pregnancy, labour and puerperium, under the care of her doctor and midwife, aided when necessary by a specialist and institutional service.

36. Continuous medical care should be provided by the general practitioner. The birth of a child is not a mere mechanical event unrelated to the life history of the mother, and the incident of pregnancy should not be the signal for the transference of a woman from the care of her general practitioner to that of another practitioner. An illness occurring before a confinement may have an important bearing on it, while subsequent and related disorders may in turn affect the general health of the mother.

37. *The General Practitioner and Midwifery.*—There has been in recent years a considerable increase in the number of women seeking to be confined in institutions. This is sometimes used as an argument in favour of divorcing the general practitioner from midwifery and replacing him by an obstetric specialist. The removal of midwifery from the normal sphere of activities of the general practitioner is likely to damage the interests of the patient and to affect adversely the efficiency of the practitioner. Taking Australia as a whole, the general practitioner still bears a heavy

responsibility for midwifery in that he is called in, or remains liable to be called in, to about 100,000 births a year. The serious defect of the present situation is that he is often called in for the first time when something has gone wrong.

38. Many of the adverse circumstances in this sphere of practice are not inherent, but can be mitigated or eradicated. Were general practitioners to be made responsible for the ante-natal care of midwives' patients they would be able during the pregnancy of these women to instil into their minds confidence, which would render them more prone to follow the doctor's advice should the labour prove to be prolonged or otherwise abnormal. Were a registered midwife present in every doctor's case he would be saved much anxiety and many unnecessary and tiring calls. Were he able to remove a patient to hospital and to continue in attendance, if necessary with the cooperation of the specialist, he would be enabled to undertake certain operations in more suitable surroundings and the patient would be less likely to object to removal.

39. The Association accordingly has come to the conclusion that continuity of medical care should be secured by the provision in any national maternity service of a general practitioner and a certified midwife for every maternity case. If the training of the medical practitioner in this branch of practice can be shown to be defective, the remedy lies in its reorganization and improvement. In the view of the Association, the remedy for the existing situation lies not in a more complete separation of the general practitioner from midwifery, but in a full recognition of his position as the person responsible for the continuous care of the mother. General practitioners should be sufficiently equipped to know how to deal with obstetric emergencies, and this can be achieved only if they remain in effective and practical touch with midwifery; this means that steps should be taken to increase the number of maternity cases which the general practitioner will attend rather than to encourage the present tendency to diminish it.

40. An efficient maternity service should include:

- (1) Ante-natal care by, or under the responsibility of, a medical practitioner chosen by the patient throughout pregnancy in every case.
- (2) Attendance in every case by a certified midwife.
- (3) Attendance by the practitioner chosen by the patient during pregnancy, labour and the puerperal period.
- (4) The provision in every case of at least one post-natal examination of the patient by the practitioner.
- (5) The services, when necessary, of a second practitioner, for example, to administer anaesthetic.
- (6) The services of a consultant when considered necessary by the practitioner.
- (7) The provision of laboratory services.
- (8) The provision of beds for all patients who in the opinion of the practitioner require institutional treatment, treatment in the institution being as far as possible continued by the same practitioner.
- (9) Supply of sterilized obstetric dressings in every case.
- (10) Provision of ambulance facilities for patients requiring to be removed to institutions.
- (11) The provision of "home helps"—that is, women trained in domestic work—who would relieve the mother of the worries of domestic management during the lying-in period.

41. It is urged that in the meantime any development which takes place should be based on the provision for every mother of a general practitioner, a midwife, and, where necessary a consultant, her care during pregnancy, labour and the puerperium being under the continuous supervision of her general practitioner.

42. *Institutional Services.*—Hospital service should be included in a comprehensive medical service. The public hospital, which at one time was primarily the place in which the poor could obtain the treatment they needed, is today providing a highly efficient service to the great majority of the population, comprising not only the poor but those who can and do pay, in part or in whole, for the care they receive. In such a service it is desirable that whenever practicable the patient should be attended by a practitioner of his own choice.

43. The Association envisages the evolution of a hospital system on a regional basis. In each region all the hospitals would be grouped around a central or base hospital, either associated with a medical school or possessing outstanding advantages in regard to staff and equipment for undertaking the more specialized methods of treatment. Around such a base hospital or hospitals would be grouped all other hospitals in the area. These, which would include both special and district hospitals, would provide such services as were within their competence, patients being passed on where necessary to the central or base hospital. The services of such a region or area would be developed as

an integrated whole, and a patient would be directed to one or other of the institutions according to the conditions from which he suffered and not because of individual prejudice or preference.

44. *The Staffing of Hospitals.*—Certain general principles underlie the Association's policy in this matter. When a hospital is devoting itself entirely to consultant and specialist work, only those practitioners who are equipped with the necessary knowledge and experience should undertake the responsibility for the medical work. On the other hand, where the conditions for which provision is made include those whose treatment falls within the sphere and competence of the general practitioner, it is highly desirable that he should be freely admitted for the treatment of patients suffering from these conditions. In practice, the larger hospital devoting itself to specialist work is staffed by selected medical practitioners, while the smaller hospital to which patients suffering from the latter type of condition are admitted is staffed on an unrestricted basis by general practitioners. Both kinds of hospital accommodation are necessary. There is, however, a growing need for a more extensive provision of a type of hospital or accommodation in which the general practitioner can treat patients suffering from conditions whose treatment falls within his sphere of competence. It commonly happens today that, for a social reason such as unsatisfactory home surroundings, a patient is admitted to hospital on account of a condition for which a patient in more fortunate circumstances would be treated at home by his own doctor. It is contrary to the interest of the patient and damaging to the efficiency of general practice if social conditions lead to a discontinuity of medical treatment.

45. The importance to a general practitioner, and to the efficiency of his service to the community, of an association with a hospital is difficult to exaggerate. The contacts which it affords him with fellow practitioners and the team work which it involves stimulate the practitioner to a higher standard of efficiency, and this is of benefit to the community.

46. Further, when patients have to be transferred to the general wards of a hospital for specialist treatment unobtainable from the general practitioner, the transfer is often marked by an unnecessarily complete break between the patient and his family doctor. A much closer cooperation should be secured by more effective methods of communication and exchange of information between the hospital and the general practitioner.

47. *Hospitals should, as a general rule, be staffed on a part-time basis—that is, by a visiting medical staff of practitioners who are also engaged in private practice.* In this way the hospital benefits by the wider experience which members of its staff gain in hospital and private practice, and the general public, whether it seeks its consultant and specialist service at hospital or privately, can avail itself of the best service in the area.

48. *Payment of Hospital Staffs.*—Consideration of the change in clientele and of the change in the law leads inevitably to certain conclusions. The strictly charitable basis of the public hospital now exists only to the extent that some of the poor are still treated gratuitously; the majority of persons obtaining treatment are those who can pay, desire to pay, and do in fact pay, directly or indirectly, towards their maintenance and treatment. Although the medical profession will, as always, gladly give its services gratuitously to those who cannot afford to pay for them, it is inequitable to require its members to give their services without remuneration in public hospitals which treat persons able to pay and which, in practice, collect payments from a large number of their patients. The field of private practice has inevitably contracted, with the result that consultants, and in particular the younger consultants, are finding it increasingly difficult to secure and to maintain a standard of living which represents a reasonable reward for their services and which enables them to maintain the highest possible standard of professional efficiency. In the view of the Association there should be remuneration of the medical staff in respect of all medical services in hospital for which payment is made, directly or indirectly, by contributory scheme, by staff authority, by employer or by patient.

49. *Out-Patient Departments.*—The responsibility for the examination and treatment at the out-patient department of persons who can obtain what they require from their own practitioners or from a consultant in his private capacity rests mainly with the hospital authorities. The desire to maintain or to increase the statistics for out-patient attendances and so to intensify the appeal to the public for financial support plays in some instances a significant part in determining the policy of hospital authorities. Not only does the abuse of out-patient departments constitute an encroachment upon the sphere of the

private practitioner, but it damages the efficiency of the hospital itself and the machinery of its out-patient department by the retention of persons who have never needed hospital attention or whose condition has reached a stage at which they could properly be transferred to other agencies. In the view of the Association the one way of dealing with this problem is to insist that, except in emergency, all patients should, upon presenting themselves at hospital, produce an introductory letter from their own practitioner. Practitioners should help hospitals by sending to hospital only those patients who need the specialized service available there.

50. The chief use of out-patient departments should be for the following classes of patient: (i) casualties (mainly accidents and sudden emergencies); (ii) patients bringing recommendation and letter from a medical practitioner for the purpose of consultative opinion; (iii) patients who as a result of such consultation are found to require special treatment which can be given conveniently only at the hospital; (iv) discharged in-patients who for a further period require special supervision and treatment.

51. **Existing Public Health Services.**—Environmental services. The adoption of the Association's proposals for a general medical service for the nation would in no way diminish the need for the maintenance and development of the environmental and impersonal protective services such as those directed to sanitation, pure water and food supply, good housing, and the control of infectious disease. Little has been done to deal with the evil of atmospheric pollution by smoke. The noise of our towns increases, and there is practically no attempt by statutory bodies to abate this evil. Water-borne and milk-borne epidemics still occur, and too little attention is paid to the safety of such an important food as milk. The problems of nutrition and physical education are just beginning to receive the official attention which they deserve.

52. **Personal Health Services.**—It is believed that the adoption of the proposals set out in this document will add greatly to the national health. But they cannot and will not yield their greatest value until greater attention is paid to the economic, social and environmental factors upon which a healthy life depends. Their adoption would, however, involve a reexamination of the existing health provision for individuals. Such specialist services as those dealing with tuberculosis and venereal disease should continue much in their present form; such services as those provided for mothers and infants and for school children will need substantial modification if overlapping with the general medical service is to be avoided.

53. Reference has already been made to the proposals for a national maternity service. The utilization of the services of the general practitioner for the ante-natal, natal and post-natal care of the normal mother would render unnecessary the establishment of ante-natal and post-natal clinics. When there are available to the mother the services of a midwife, a general practitioner, an obstetric specialist, and the necessary auxiliary facilities, the need for institutional accommodation for normal cases will be greatly lessened. On the other hand, the need for consultant and specialist facilities in the home and in the clinic or out-patient department, and for institutional accommodation in difficult cases, will be increased rather than diminished.

54. The provision of a family doctor for every family would secure for infants and young children the service which the general practitioner is capable of rendering. While this would render unnecessary any other provision for their general medical care, the system of child welfare centres at which mothers could obtain advice and guidance in the care and nurture of their children would continue to be of the greatest value. Instruction in mothercraft and the general care and hygiene of infants, hints on nursing, dressing and bathing, and regular weighing, are of the greatest possible value and can be efficiently undertaken in infant welfare centres. The centres should continue their educational and social work in collaboration with the family doctor. The provision of a family doctor for every child would enable the clinics to increase the value of their work by concentrating on the more positive aspects of health.

55. One of the most valuable developments in our educational system during the past generation has been the medical inspection of school children and the provision made for securing the treatment of the defects discovered on inspection. The work of regular medical inspection, particularly of those children found to be suffering from serious or persistent defects, should of course continue and develop. It would not, however, be necessary to provide treatment facilities for those conditions normally treated by the family doctor. Through his agency the necessary specialist facilities would be available, and the treatment facilities given by the school medical service should be

limited to those conditions which could be more effectively dealt with in the clinic or the hospital out-patient department. As a result the school medical doctor, like the infant welfare doctor, would be enabled to concentrate his attention on a field of great potentiality, that of the positive prosecution of mental and physical health.

56. **Rehabilitation Services.**—The phase of after-care is the one most commonly neglected today. Excellent primary treatment is of little value in many cases unless it is followed by a phase of active exercise directed to a complete restoration of function. The Association therefore urges the establishment of rehabilitation centres where physical and mental development could be achieved by games, by activities in the gymnasium and the swimming pool, and by graduated work.

57. **Administration.**—A fair criticism of health insurance schemes, as established previously both in this and other countries, is that it has not been preventive in practice and but little in outlook. This in the main is due to the fact that the financial aspects of schemes have assumed overwhelming importance and the preventive side has been crowded out in the welter of complex administrative difficulties. As previously stated, the Royal Commission on National Insurance, in its report published in 1926, after reviewing the reports of experience in other countries, states that it is not desirable to include medical benefit in any scheme for financial benefits, but that it should be dealt with under a national health scheme.

The Association believes that the organized preventive and curative medical services should be fully coordinated, and for this reason alone it is essential that administrative responsibility for health insurance should be placed with a statutory authority, a board of management composed of representatives of the various interested bodies established under a Commonwealth act administered by the Minister for Health.

The functions of this statutory body would be: (a) to arrange for the conduct of the medical service, (b) to estimate the annual sum necessary for carrying out the scheme, (c) to administer the fund necessary for the service, (d) to conclude agreements with the contracting parties, and (e) to require the performance of agreements.

58. It would be necessary to appoint in each State a board of management with a constitution similar to that of the Federal body. The duties of a State board would be such as were delegated to it by the Federal body.

59. All committees and subcommittees with functions relating to personal health should include medical practitioners and the machinery of cooption should in all cases be utilized to appoint, *inter alios*, medical practitioners to the committees or subcommittees.

Private Clinical Laboratories.

At the meeting of the Federal Council held in March, 1941, some correspondence was read that had been received from the Victorian Branch of the Australian Chemical Institute and from the Section of Pathology and Bacteriology of the New South Wales Branch on the subject of the employment of unqualified persons in private clinical laboratories. The Australian Chemical Institute asked for the support of the Federal Council in its request to the Postmaster-General regarding transmission of specimens through the post. It was anxious to secure registration of laboratories for this purpose, and suggested that persons who might be registered should include medical practitioners, veterinary surgeons and biological chemists approved by the Australian Chemical Institute. The institute had written to the Director-General of Health on the subject, and he had replied that it was not possible for him to give the assurance desired, but that the views of the institute would be borne in mind. The General Secretary stated that in accordance with the decision of the previous meeting he had communicated with the Branches on the subject. The Victorian Branch had replied that control was not possible until suitable legislation was introduced, but that it agreed with the institute's view. The Western Australian Branch had replied that the matter did not affect Western Australia. The Queensland Branch had agreed with the Australian Chemical Institute, and the South Australian Branch's views were the same as those of the Victorian Branch. The New South Wales Branch held the view that all clinical laboratories should be registered and that the only persons eligible for registration as controllers of such laboratories should be medical practitioners and veterinary surgeons. The Federal Council resolved to communicate with the Director-General of Health and request that all clinical laboratories other than those controlled by governments should be registered in the names of legally qualified medical practitioners or legally qualified veterinary surgeons.

Contract Practice Committee.

The General Secretary pointed out that the term of office of the contract practice committee of the Federal Council would expire in two months. It was resolved that the Branches should each be asked to make a nomination to this committee and that appointments should be made in accordance with the nominations as from November 1, 1941.

Friendly Society Contract Practice.

The Victorian Lodge Capitation Rate.

Further reference was made to the Victorian lodge capitation rate. Dr. H. C. Colville pointed out that in June, 1940, a conference was held between the Contract Practice Committee of the Federal Council and the Consultative Committee of the Friendly Societies Council of Australia. The decision of this conference was that no further steps should be taken in regard to the proposed Federal common form of agreement until some adjustments had been made in the Victorian lodge capitation rate. The representatives of the Consultative Committee of the Friendly Societies Council who attended this conference had been unanimous in their agreement on the matter. The Victorian Branch was then informed and was asked to negotiate with the friendly societies in Victoria to bring about the change, so that the capitation rate in Victoria might be made the same as that prevailing in New South Wales. Representatives of the friendly societies were met in conference on several occasions. Of the five friendly society representatives who met the Victorian Branch, two were members of the consultative committee which had agreed that the Victorian capitation rate should be raised. The result of the conference between the Victorian Branch and the representatives of the friendly societies in Victoria was that the latter had refused to take any steps to have the rate altered. Someone had written to the Federal Prices Commissioner, and the result was that it would be necessary to show cause why the increase should be made. The Victorian friendly societies were quite definite in their refusal to agree to an increase. They had doctors, so they said, who would work for them at a capitation rate of £1 per annum, and refused to consider the payment of 26s.

The General Secretary said that the friendly societies in New South Wales wished to know when the Federal common form of agreement would be introduced, and he had replied that it all depended on the decision of the Victorian friendly societies. At this stage Dr. Colville asked whether the Federal Council wished the Victorian Branch to continue in its adherence to the Federal Council's decision, or whether each State should be left to make the best arrangements that it could. He thought that the matter should be decided.

Dr. W. F. Simmons said that the question was important from the Federal point of view. He was very surprised at the attitude of the Victorian friendly societies. Dr. Colville said that the matter was theoretically *sub judice* with the friendly societies. He suggested that the only reasonable thing to do was to reopen the matter with the Federal friendly societies committee. This Federal body should be asked whether it would act and also whether it had jurisdiction. Dr. T. A. Price said that if a favourable reply came from the Prices Commissioner, delegates should be sent from the Federal Council and from the Consultative Committee of the Friendly Societies Council to tell the Victorian friendly societies that they were damaging the cause of friendly society practice in Australia. On the motion of Dr. H. C. Colville, seconded by Dr. W. F. Simmons, it was resolved that the Consultative Committee of the Friendly Societies Council should be approached again and that it should be asked whether it proposed to take any action, and also that, failing a suitable reply from the Prices Commissioner, the consultative committee should be asked to send a representative to Victoria with the General Secretary of the Federal Council, to see whether an agreement could not be reached.

The Capitation Rate for the Care of Dependents of Friendly Society Members on Active Service.

At the previous meeting consideration of the capitation rate for the care of dependents of friendly society members on active service had been deferred pending the reaching of an agreement between the Victorian friendly societies and the Victorian Branch. However, no agreement had been reached, and it was therefore decided that the Council should adhere to its present decision and that no further concession should be made.

Broadcasting.

Reference was made to the Joint Parliamentary Committee on Broadcasting that was taking evidence in different parts of Australia, and the Federal Council had before it a statement which was given in evidence on behalf of the

Federal Council to the committee by Dr. H. R. R. Grieve, of the New South Wales Branch. This matter was the subject of a leading article in this journal of August 2, 1941. Dr. Grieve's statement was received.

The Parliamentary Select Committee on Social Services.

Reference was made to the Parliamentary Select Committee on Social Services, which is taking evidence in different parts of Australia, and the advisability of the submission of evidence on behalf of the Federal Council was discussed. The Federal Council had before it a letter from Dr. C. H. Dickson, Medical Secretary of the Victorian Branch, setting out a questionnaire according to which evidence might be given. It was agreed, on the motion of Dr. W. F. Simmons, that evidence should be given on behalf of the Federal Council by the General Secretary.

National Health Insurance.

The Press Publicity Committee.

Dr. George Bell and Dr. W. F. Simmons were reappointed members of the publicity committee of the Federal Council.

National Health Insurance in New Zealand.

The General Secretary referred to the bill that was before the New Zealand Parliament dealing with the subject of national health insurance. He said that he had written asking for a copy of the bill, and he also referred to the provision in it that medical practitioners could not demand fees for private practice or sue for fees in connexion with a general practitioner service.

Cyclopropane Gas for Anaesthesia.

Some correspondence was read from the Western Australian Branch regarding tariff restrictions on cyclopropane gas. The General Secretary said that he had had inquiries made and had been informed by the Customs authorities that there was no restriction on the importation of this gas.

The Use of the Thomas Splint in the First Aid Treatment of Fracture of the Femur.

The General Secretary read a letter from the Editor of THE MEDICAL JOURNAL OF AUSTRALIA, bringing to the notice of the Federal Council a leading article published in the journal of February 1, 1941. In this article it was stated that inquiries had been made from the medical superintendents of hospitals in Brisbane, Sydney, Melbourne, Adelaide, Perth, Hobart and Launceston, and that only in Brisbane and in parts of Sydney was the Thomas splint used by ambulance officers. The Editor asked that the Federal Council should do what it could to bring about the use of the splint in the first-aid treatment of fractures of the femur. The General Secretary said that the letter had been sent to Branch councils. The New South Wales council agreed that all ambulances should be supplied with the splint and that ambulance officers should be trained to use it. The Tasmanian Branch sent a letter of approval. The Victorian Branch had referred the matter to the officers of the Ambulance Association. The Western Australian Branch, contrary to advice received by the Editor, said that the splint was in use throughout Western Australia. The General Secretary said that it was a matter for each Branch. Dr. A. F. Stokes said that V.A.D.'s were being taught the use of the splint in South Australia, but that ambulance officers were not taught. The President said that the Federal Council had to be very careful what action it took in making any recommendations at all regarding treatment, though he agreed that the first-aid use of the Thomas splint for fractures of the femur was desirable. The General Secretary said that in New South Wales a Thomas splint had been supplied to each of the "A.R.P." areas. It was resolved, on the motion of Dr. George Bell, that the Branches should be urged to use their influence to see that an adequate supply of Thomas splints was available for civil and "A.R.P." needs.

The Registration of Alien Practitioners.

A letter was received from Colonel A. P. Derham enclosing a petition to the Federal Council signed by members of the medical profession serving overseas concerning the registration of aliens and the safeguarding of the interests of men who were serving with the forces. The petition stated that members serving overseas had learned with disappointment and alarm of the proposed registration of aliens, and that they regarded the proposal as a threat to the precious remnants of their practices. They were not impressed by the suggestion that registration should be allowed for limited areas. They did not think that this was justified

on grounds of expediency, and thought that it was preferable that permission should be given in certain circumstances for these aliens to serve in institutions under special licence. The General Secretary reported that he had sent the copy of this document to the Minister for the Army, to the Director-General of Medical Services, to the Premiers of the several States, to the Branches of the British Medical Association in Australia, and to the Federal Executive and State Branches of the Returned Sailors, Soldiers and Airmen's Imperial League of Australia. A reply had been received from the New South Wales Government stating that the provisions of registration had been waived in regard to those aliens who had special qualifications, and that eight could be registered in any one year. Four had been registered in the first year and four in the second. The Western Australian Government had replied that the Federal Council need know no fear that any registration of aliens would be detrimental to the interests of practitioners serving overseas; there was no intention of flooding the State with alien practitioners. The Tasmanian Government replied that it recognized the undesirability of altering the law, and no action of this kind was contemplated. The Victorian Government replied that the communication would be placed before the Chief Secretary, and the Queensland Government that the communication had been noted. The Minister for the Army replied that he had noted the views expressed, and the Director-General of Medical Services had replied that he was placing the document in the hands of the Minister dealing with coordination. On the motion of Dr. H. C. Colville it was resolved that a reply be sent to the effect that the Federal Council was entirely in sympathy with the views expressed, and that it would from time to time take what action it could. Dr. F. W. Carter said that he thought that the Federal Council should state its policy, and it was resolved, on the motion of Dr. H. C. Colville, seconded by Dr. N. M. Cuthbert, that the Council was opposed to the registration of alien doctors in any of the States of the Commonwealth.

War Emergency Organization.

Conditions of Service Committee.

It was resolved that Dr. F. L. Davies and Dr. H. C. Colville should be reappointed members of the Conditions of Service Committee, and that they should have powers of cooption.

Repatriation Commission.

The Council had at its meeting in March, 1941, had before it a request from the Repatriation Commission that a medical service should be instituted for the benefit of wives, orphans and widowed mothers of men serving with the defence forces in the present war. The General Secretary reviewed the decisions made at the March meeting. The Federal Council approved of the establishment of a service as requested by the Repatriation Department, and thought that it should be run on the lines of the Federal common form of agreement. It also thought that the capitation rate should be uniform throughout Australia, with a 25% increase for country areas. It agreed that there should be no examination of beneficiaries before their admission to the service. If every person eligible to be put on the list was included, it thought that the rates should be 26s. *per annum* and 32s. in the country. If every person was not included, the rates should be 32s. and 40s. It was thought that the agreement should be subject to review every three years. Dr. Colville and Dr. Davies had been authorized to deal with the Repatriation Department in this matter, and it had also been determined that the Repatriation Department should be made to understand that the service was to be made at a concessional rate. If no conclusion was reached with the Repatriation Department, it had been decided that matters should continue for a period of six months as they were.

Dr. F. L. Davies pointed out that the Repatriation Department had been unable to accept the terms put forward by the Federal Council and had asked to meet the representatives. Dr. Davies, with Dr. H. C. Colville and Dr. C. H. Dickson, had met the Chairman of the Repatriation Commission. After discussion the Chairman of the Commission had asked the Federal Council committee to put the matter in writing for transmission to the Minister. Subsequently the Chairman had written stating that he regretted that the department was unable to agree to the conditions, and asking for an extension of the arrangement under present conditions. He gave several reasons for his request. The General Secretary said that in reply to the Chairman he had stated that the Federal Council would have to insist on the work being carried out under the Federal common form of agreement, and added that there would be no examination of beneficiaries, the rates would be 26s. for

metropolitan areas and 32s. for the country, and the arrangements should be subject to review in three years. It was also conceded that beneficiaries might be put on the list of any doctor, whether medical officer to a lodge or not. The Chairman had then called to see the President. The General Secretary said that he had then written to the President and to the Branch councils. Dr. F. W. Carter said that the Western Australian Branch did not agree that the Federal Council should enter into any agreement in which the medical fee was the only static factor. The Queensland Branch thought that the scheme might be brought into conformity with the general service scheme approved by the Federal Council. The Queensland Branch thought that a suitable fee would be £1 per unit (per individual), and that all widows, orphans and widowed mothers should be eligible for inclusion. It was also suggested by the Queensland Branch that during the completion of arrangements for this service honorary service might be given by the medical profession for a period of three months. The Victorian Branch thought that the arrangement should be made on a Commonwealth-wide basis and that the fee should be 26s. and 32s. The New South Wales Branch approved of the existing arrangements as a temporary measure. The President said that the crux of the matter was the Victorian rates, and that he had told the Chairman of the Repatriation Commission that the rate would have to be uniform. Dr. F. L. Davies referred to the statement that it was invidious that the people for whom this service was requested and friendly society lodge patients should pay different rates. He pointed out that for this service the rates would not be paid by the person concerned, but by the Repatriation Department. After further discussion it was agreed that the views of the Federal Council should again be forwarded to the Minister for Repatriation, and it was also decided that in the event of an unfavourable reply the offer to accept beneficiaries on lists for this service without examination should be withdrawn.

Restrictions on High Frequency Apparatus.

The General Secretary laid on the table the correspondence with the Navy Office and the Chief Radio Inspector regarding the Wireless Transmitting Apparatus (Possession) Order.

Medical War Relief Fund.

The General Secretary reported that the Medical War Relief Fund had reached a total of £4,715 14s. Of this amount South Australia had contributed £607 16s. 6d., Victoria £1,716 4s., Tasmania £175 18s., Queensland £227 2s., Western Australia £420 14s., and New South Wales £1,567 16s. 6d. He said that this was a handsome contribution, but he was disappointed that more had not contributed. It was resolved on the motion of Dr. W. F. Simmons, seconded by Dr. T. A. Price, that the fund should close on December 31, 1941, and that a further appeal signed by the President should be made to Branch members through the columns of THE MEDICAL JOURNAL OF AUSTRALIA. It was also resolved that in the meantime the sum of £4,500 should be sent to England.

The General Secretary said that the Queensland Branch had raised the question of whether contributions to the Medical War Relief Fund were allowable as deductions in income tax returns. A letter had been written to the Commissioner of Taxation, who had replied that such donations were not allowable deductions.

Appeal from England for Medical Officers.

The General Secretary referred to the appeal that had been sent by Dr. G. C. Anderson for medical men to be sent from Australia to Great Britain. He said that when this request arrived in April he communicated with the President and they had discussed it together with the heads of the medical services of the Navy, Army and Air Force. The whole question had been very fully considered and it had been decided that no officers could be sent. Dr. H. C. Colville said that he was perturbed at this decision and had written to the President a letter in which he dissociated himself from it entirely. Dr. Colville was of opinion that some officers should have been sent. The President said that he had read Dr. Colville's letter and had forwarded a copy of it to Dr. Newman Morris. Dr. Colville pointed out that the general public should suffer some privation as compared with the medical services which they enjoyed in peace-time. No responsible opinion had suggested that the general population should have anything different. No one had asked hospitals to curtail their luxury services. Dr. T. A. Price said that in Queensland great difficulty was being experienced in giving hospital services, and that the hospitals in very many places were

understaffed. Dr. W. F. Simmons was of the opinion that there was something to be said for Dr. Colville's views regarding public hospitals. He did not see why hospitals should not cut down their out-patient services. He was quite sure that some reduction could be effected. Dr. N. M. Cuthbert said that there was a great deal in Dr. Colville's letter. Some general statement was necessary and should go out from the Federal Council. At the present time no one gave instructions to medical superintendents of hospitals to reconstruct their services. The President pointed out that it was within the function of the State coordination committees to go into this question. Dr. A. F. Stokes said that when the cutting down of hospital services was being undertaken, consideration would have to be given to the older practitioners. He knew of some senior men who were working for as long as eighteen hours a day. No *locum tenentes* were to be had, and these older men could not obtain relief. If hospital services were curtailed, a greater burden would be thrown on the older men in private practice. In South Australia one-third of the profession was engaged either on home service or on active service overseas.

At this stage Dr. Colville read a letter that he had sent to Sir Henry Newland, in which he stated that the sole function of the coordination committees was to coordinate. The Federal Council should make some statement of what was required and he thought that medical work might be divided into essential and non-essential services. The General Secretary pointed out that the problem would have been simplified if it had been possible to have conscription of medical men. Dr. F. W. Carter did not see how the work done could be cut down a great deal. Every practitioner was doing much more than his own work. It was finally resolved, on the motion of Dr. H. C. Colville, seconded by Dr. George Bell:

That the Central Coordination Committee be asked by this Council to consider the question of instituting a classification of the work of public hospitals into essential and non-essential services with a view to the possible necessity of curtailing the latter in the event of a national emergency.

Petrol Rationing.

A letter was received from the Victorian Branch stating that medical practitioners in the State had been put into Class 26 in regard to petrol rationing. In other States medical practitioners were in Class 1. Persons in Class 26 had been subjected to a cut of 50% in their petrol supplies. It was thought that practitioners should have the right of appeal against decisions to restrict their use of petrol, and it was suggested that the Federal Council might take some action in this regard. A letter was also received from the President of the Liquid Fuel Control Board, asking for the cooperation of medical practitioners, and suggesting that small committees should be appointed in each State to assist in the distribution of petrol. The Queensland Branch was anxious to have information about petrol restrictions because the position in that State was an embarrassment to the medical profession. The General Secretary stated that he had written to the Branches asking them to appoint committees to effect the 20% reduction. He added that the whole matter was a question of supply. If the petrol was not in the country, it could not be used. On the whole the profession had responded very well indeed to requests for cooperation.

Shortage of Overseas Importations.

A letter was received from the Queensland Branch regarding the scarcity of glass syringes and endoscopic lamps. These had previously been imported from England, and their importation was now impossible. The Queensland Branch thought that the Federal Council might possibly take some action. The General Secretary reported that he had communicated with the Chairman of the Medical Equipment Control Committee, who had replied that syringes were being manufactured in Australia and that very shortly the output would be as much as 1,000 a week. He also said that the supply of endoscopic lamps would be increased.

The Payment for Medical Services in a National Emergency.

The General Secretary read a letter from the Victorian Branch regarding the payment of medical fees in a national emergency—for example, for attendance on children sent from the city to the country or for "A.R.P." work. The General Secretary said that he had forwarded the letter to the Branches. Dr. H. C. Colville said that the Victorian Branch had brought the matter up as it was thought that it should receive consideration. At the same time there

was no urgency about it. The General Secretary pointed out that in Great Britain the members of the medical profession were paid for "A.R.P." work. It was decided to defer consideration until the next meeting.

The Radiological Examination of Militia Recruits.

Further reference was made to the use of microradiography in the examination of Militia recruits. This matter was brought up for consideration at the March meeting of the Federal Council at the instance of the Victorian Branch, and it was then resolved that a letter should be written to the Minister for the Army, urging the adoption of the Victorian Branch's suggestion. This matter was the subject of a leading article in this journal in the issue of July 12, 1941. In this article it was pointed out that the Minister had replied to the Federal Council that the use of microradiography for Militia recruits was impracticable. The General Secretary said that he had written to the Minister again. Though it was reported that microradiography was being used in one of the States for the examination of recruits, it had not yet been adopted in New South Wales.

The Examination of Recruits for the Royal Australian Air Force.

The General Secretary said that he had received a letter from the Western Australian Branch regarding the examination of recruits to the Royal Australian Air Force. It appeared that a circular was issued to recruits stating that the results of their ear examination might be unsatisfactory unless they ensured that their ears were clear of cerumen when they arrived at the recruiting centre. If cerumen was present the examination of the ears was suspended and recruits were advised to see their doctors before going up for examination, in order to be certain that cerumen had been removed. Sometimes the recruit was sent to hospital to have his ears syringed; but in certain circumstances the Royal Australian Air Force medical officers, if requested in writing, would undertake the syringing. It had been stated that a fee of five shillings was charged by the Air Force medical officers; but apparently this was incorrect, for no charge was made at the recruiting centres. Dr. F. W. Carter said that the arrangement was an imposition on the recruit and also on the private medical practitioner, who would not charge for such a service. It was resolved that the matter should be reported to the members of the Conditions of Service Committee, who would see Air-Commodore Hurley on the matter.

The Medical and Pharmaceutical Service to Dependents of Members of the Armed Forces.

At its meeting in March, 1941, the Federal Council had before it a proposal made by the Victorian A.I.F. Women's Association, the Victorian Branch of the Red Cross Society and the Victorian Branch of the Returned Sailors, Soldiers and Airmen's Imperial League, that a medical service should be established for the dependants of men serving with the forces. It was resolved at that meeting that the three bodies should be informed of the social services scheme in operation in New South Wales. The General Secretary said that he had written to the Victorian A.I.F. Women's Association on February 25, 1941, to the effect that the Federal Council approved of the establishment of such a service if a suitable machinery could be arranged. As no reply had been received, he wrote a second time and then was told that the Victorian A.I.F. Women's Association felt that as it was a very new organization and was not a Federal body it could not approach the Federal Government in the matter. Its members were anxious to join friendly societies as honorary members. The correspondence was received.

Dependants of Lodge Members on Active Service.

The General Secretary read a letter from the South Australian Branch regarding the attendance on the dependants of lodge members on active service. This had reference to the wives of lodge members from Western Australia who came to live in South Australia while their husbands were away. These dependants wanted to have medical attention and, if it was available, wished to know what the fee would be. The matter had been reported to the Branches. The consensus of opinion from the different Branch councils was that these people should be accepted on the lodge lists at the rates prevailing in the States to which they had gone. A motion to this effect was carried.

Long Hours of Munition Workers.

The General Secretary reported that he had written to the Prime Minister regarding the long hours worked by munition workers. It had been pointed out to the Prime

Minister that a twelve-hour shift was far too long and that it was not just that men should be asked to work three and a half hours without a rest pause. The Prime Minister had replied that under the conditions at present existing there was no alternative to the working of twelve-hour shifts. This matter was discussed in a leading article in this journal in the issue of October 18. It was resolved after discussion that a further letter should be written to the Prime Minister and that the views of the Federal Council should be emphasized again. It was also resolved that copies of the letters should be sent to Dr. J. Newman Morris.

The Central Medical Coordination Committee.

The General Secretary referred to regulations under the *National Security Act, 1939-1940*, and said that he had received a copy of Statutory Rules 1940, Number 53, of the National Security (Medical Coordination and Equipment) regulations. He also said that it had been hoped that Major-General F. A. Maguire, the Director-General of Medical Services and Chairman of the Central Medical Coordination Committee, would be able to discuss with the Federal Council the strengthening of the relations of the State medical coordination committees with the Federal Council. Unfortunately Major-General Maguire was indisposed and had sent an apology for his non-attendance.

Matters Deferred.

At the previous meeting of the Federal Council consideration had been given to a Federal Emergency (Compensation) Fund, the Public Medical Services, the revision of the Federal Council's code of ethics, and the organization of the medical profession. Short reference was made to each of these matters, and it was resolved that their consideration should be deferred once more.

Matters of Urgency.

Reference was made to the establishment of the Air Training Corps, consisting of lads from sixteen to eighteen years, and of the medical examination that would have to be made of these young men prior to their enlistment. A request had been made for honorary examinations for this purpose. It was pointed out that the examination was a complete examination and that more and more bodies of this kind were asking for free examination. The question was whether these examinations should be made without charge or whether a fee should be paid. Dr. A. F. Stokes said that in South Australia the V.A.D.'s were asked to be examined without payment of a fee. Dr. N. M. Cuthbert said that the man power of the Air Force was adequate and, as far as he could see, there was no reason why examination for admission to the Air Training Corps should not be carried out by Air Force medical officers. The General Secretary pointed out that a question of principle was involved. For example, the New South Wales Branch had been asked to cooperate in the medical examination of a large number of young women before their acceptance as motor drivers, and it had decided that a fee should be charged. He thought that as a matter of principle some fee should be paid; but if so, he wanted to know on what basis the charge should be made. Dr. H. C. Colville said that an awkward position might arise in areas where there was no Air Force medical officer. Dr. Cuthbert said that the services should accept the responsibility for their own examinations, and several members, in reply to this statement, pointed out that the examination in question was a pre-enlistment examination. After further discussion it was resolved that the several services should undertake examinations for their own recruits, and that if this was not agreed to, payment should be made at the rate laid down for examination of army recruits.

Dr. N. M. Cuthbert moved as a matter of urgency that for the duration of the war it was the opinion of the Federal Council that no radical change should be made in the present form of medical service to the community. He discussed this matter and gave several reasons for his view. The motion was seconded by Dr. H. C. Colville and carried. It was also resolved that Dr. J. Newman Morris should be informed of the Federal Council's view in regard to this matter.

The President raised the question of the sending of information to Dr. J. Newman Morris regarding the doings of the Federal Council and said that it was important that Dr. Morris, as the Council's representative on the National Health and Medical Research Council, should be fully informed of the Federal Council's views. It was resolved that a copy of the complete minutes of each meeting as well as of the agenda papers should be sent to Dr. Morris, and also that if he was available at any time when the Federal

Council met, he should be invited to hear the discussion of any matter that had relation to the activities of the National Health and Medical Research Council.

Date and Place of Next Meeting.

Dr. W. F. Simmons suggested that it might be possible to hold occasional meetings of the Federal Council in centres other than Melbourne and Sydney. He thought that if this were done it would tend to encourage the Federal spirit. He asked what the extra cost would be. The General Secretary pointed out that to hold a meeting in either Brisbane or Adelaide would cost not less than £100 more than usual. It was resolved that this step could not be undertaken at present, and the determination of the date and place of the next meeting was left in the hands of the President.

Votes of Thanks.

On the motion of Dr. George Bell, a vote of thanks was accorded to Sir Henry Newland for presiding, and at the instance of the President the New South Wales Branch was thanked for its hospitality.

Correspondence.

THE PRACTICE OF MEDICINE IN NEW ZEALAND.

SIR: Events are taking place under the *Social Security Act* in New Zealand, the lessons of which may be of paramount importance to the profession in Australia.

For most of us our only knowledge of conditions in New Zealand comes from small, disjointed, not unbiased fragments in the daily Press.

I am fully aware that THE MEDICAL JOURNAL OF AUSTRALIA is not a newspaper; but concerning this vitally important matter I would urge THE MEDICAL JOURNAL OF AUSTRALIA to seek out and publish facts concerning the relations of the profession and the people in New Zealand, the cooperation of the profession in the working of the act, the official attitude of the New Zealand Association. I would also urge THE MEDICAL JOURNAL OF AUSTRALIA to invite articles and correspondence on these matters from members of the profession in New Zealand.

Yours, etc.,
KEVIN P. RUSH.

297, Church Street,
Richmond, E.1,
Victoria.
October 2, 1941.

[Steps are being taken to appoint a New Zealand correspondent to THE MEDICAL JOURNAL OF AUSTRALIA and to secure an authoritative account of recent happenings in the Dominion.—EDITOR.]

INDUSTRIAL FATIGUE AND AUSTRALIA'S WAR EFFORT.

SIR: In the journal of October 18, in an editorial apparently inspired by my article on industrial fatigue, you refer to "workers willing to be led". I think that, in justice to those who realize the effect of the present system of long hours, it should be made quite clear that, as far as reduction of overtime is concerned, the majority of workers are not willing to be led. Experience of the past year has shown that, in any factory, if hours of work are reduced, employees leave in search of other work on which they do more overtime. Extra payment for long hours of work appears to be the biggest factor in raising industrial opposition to the reduction of overtime. It has not been practicable to enforce fully the regulations which are supposed to govern the migration of labour from one job to another.

This position is realized now by some at least of the "captains of industry". It is possible that, eighteen months ago, they could have controlled the tendency to work long hours, if they had not been obsessed by "the need for production". Many of them realize now that, stimulated by that need for production, they have adopted methods which are defeating their own object; but this awakening has come too late (in those cases where it has come at all). The control of these matters is no longer in the hands of the "captains of industry", and they are powerless

to effect a cure, even when they desire to do so. The same position is fully realized by the executives of trade unions, many of whom have spent years in fighting for a shorter working week; they now see their years of fighting wasted, and are powerless to stop the rot, because in all unions engaged on war production there is, at the present time, a strong tendency for the "tail to wag the dog".

The only remedy appears to lie in Government action prohibiting unnecessarily long shifts in all branches of all industry throughout Australia. Similar action has been taken in Great Britain, and, as you point out, in Germany. Public opinion apparently is not yet educated to the need for such action in this country; but the need is great; and I suggest that it is therefore very important that, in discussing the question of hours of work, one should stress the fact that our present methods are inefficient. Whether Government action along the lines which I have indicated is likely is a question which few would care to answer; but no harm can be done by, and much good may result from, attempts to educate the public to realize that long hours are inefficient. The remedy is not as easy to apply as it would be if all workers were "willing to be led".

Yours, etc.,

9, Turnbull Avenue,
Toorak, S.E.2,
Melbourne.
October 22, 1941.

H. M. L. MURRAY.

"GLUCOSE D" AND LOW BLOOD PRESSURE OF MIGRAINE.

SIR: Though I am not able to check the back numbers of *THE MEDICAL JOURNAL OF AUSTRALIA* or *The British Medical Journal*, if memory serves aright, there have been quite a considerable number of papers and notes on migraine and allied headaches, usually periodic in nature, and in the said references to the subject I cannot recall reference to two facts that seem very definitely associated. I refer to the frequency in such patients of a low blood pressure and the very frequent and often dramatic improvement or cure by the exhibition of "Glucose D". It would be interesting to know whether others have had similar experience. My own cases have at any rate convinced me to employ daily ingestion of "Glucose D" and to counsel patients on the first appearance of preliminary symptoms—finger tingling, photophobia, diplopia, or appearance of flashes of light—to take at least two tablespoonfuls of this substance in water, weak coffee or soda water *et cetera*. To conclude, as an example out of many, one male subject gave a history of intense periodic headaches with about two weeks' interval for some six years. Since administration of "Glucose D" no headache for some four months. Hoping this may be of interest.

Yours, etc.,

BURTON BRADLEY.

C.o. British Medical Agency of New South Wales, Limited,
135, Macquarie Street,
Sydney.
October 10, 1941.

DÉBRIDEMENT: A WARNING.

SIR: Recently I had to deal with a fracture of lower ends of both bones of the forearm. There was a half-inch wound, with contused margins in the front, about three inches above the wrist. The patient could open, close and spread the fingers, flex and extend the wrist.

Being full of good theory, I decided the wound must be enlarged, edges cut clean and extent of deep lacerations and foreign bodies determined. The depths appeared clean except for a small laceration of muscle with some protrusion of the same through a gap in the deep fascia. I made a final snip of "protruding and lacerated muscle" and found in my forceps the end of a large vessel staring me in the face, beyond doubt the ulnar artery. There was no tourniquet and as yet no bleeding from either end of the vessel.

An agitated search revealed a distinct loop of ulnar nerve a whisker away and intact—whew!

It was a very definite loop, probably due to the movement of the fractured ends, no traction having been as yet applied. The ends of the vessel now commenced to bleed a little and were tied. The wound was gratefully partly closed after further disposing of the end of the ulnar artery, which insisted on popping through the gap, and the fracture treated *secundum artem*.

Comment on the degree of surgical skill exhibited is not specially indicated—the anatomical facts remaining and the warning to the surgically unsophisticated.

Yours, etc.,

CRAWFORD MCKELLAR.

143, Macquarie Street,
Sydney,
October 15, 1941.

VISUAL STANDARDS FOR THE ARMY.

SIR: At the ophthalmological congress just completed in Melbourne the old question of standards of vision of recruits excited a lively discussion.

It was settled in Egypt in the last war by adopting a minimum standard for front-line troops of 6/24 in the right eye and not blind in the left. This worked exceedingly well. Particulars are set out in a work of mine called "A Vision of the Possible", and by Lieutenant-Colonel Eason in *Guy's Hospital Reports*, Volume LXX.

With the exhaustion of man power in Britain no more men of pre-war standard were available and may not be in Australia shortly, if not already.

I settled the matter long ago by lowering my own vision, using suitable glasses to 6/24 right and left, and then driving my car through dense traffic without difficulty. It was not so easy at night.

Had the pre-war standards been adhered to the Egyptian Expeditionary Force would have lost many thousands of men and the battle might well have gone against us.

The present Australian standards are in my judgement excessive.

I need only add that the Egyptian standard implied that there was no eye disease.

The Director-General of Medical Services, Sir Alfred Keogh, issued a circular pointing out that very many men in the first line did not need good vision. Such men were in the supply services—the artillery—where the work was done by telephone and plan and so on. There were extensive ordnance factories, railways *et cetera* in Egypt and there was no trouble. Man power dominated the position then just as it does now.

Yours, etc.,

JAMES W. BARRETT.

103-105, Collins Street,
Melbourne, C.1.
October 18, 1941.

THE OPERATIVE TREATMENT OF CHRONIC SACRO-ILIAC ARTHRITIS.

SIR: I should be grateful if you would publish the following correction to my reports of cases entitled "The Operative Treatment of Chronic Sacro-Iliac Arthritis".

Under the sub-heading "Comment" the text reads: "Fixation of the sacro-iliac joint can be effected by the insertion of one 4.5 millimetre bone screw."

The measurement in this sentence should read: "three-eighths of an inch".

Yours, etc.,

N. D. ROYLE.

Craignish,
185, Macquarie Street,
Sydney.
October 20, 1941.

A NATIONAL MEDICAL SERVICE.

SIR: It was a pleasure to read Dr. Maude's reasoned and temperate approach to the question of socialized medicine (*THE MEDICAL JOURNAL OF AUSTRALIA*, September 20, 1941), but before going on to support his plea I should like to comment briefly on Dr. Davey's letter in the next issue, in which he does not reason at all, but simply states as facts opinions which are, to say the least of it, highly debatable. For example: "socialization means a levelling down of present standards to mediocrity", "it is a bureaucratic, soul-destroying regimentation", "a veritable medical Fascism"—in short, the all too usual appeal to emotion and prejudice. Has not the most brilliant research work on sleeping sickness, malaria, yellow fever and nutrition been carried out by what may fairly be termed a branch of socialized medicine? And did Pavlov and Filov have their souls destroyed, or their minds either, by socialized medicine?

Socializing medicine, in my opinion, should not in any way destroy the incentives to do good work; I take it that the most important of these are not material reward, but the mere satisfaction of knowing that work is being well done, and the approval of one's fellows for that reason. If the question of fees no longer came into the picture the useful scope of one's work should be widened; for instance, in my own practice I would often like to suggest some form of physical therapy to a patient who cannot afford fees, but it is sometimes impossible for me to do so, as, being compelled to live on the fees I earn, the amount of free work I can do is limited.

In considering the form socialized medicine should take, I think we should lay down certain fundamentals. (1) Provision should be made for post-graduate study, say three months every five years, which would mean that 5% of the doctors would be constantly undergoing a refresher course. This should be in a metropolitan hospital set apart for that purpose. (2) In all towns where there were several practitioners the work should be done from a medical centre, and there should be a roster for night and week-end work. (3) The men working alone should be chosen for good all-round ability, should have special consideration in salary and holidays, and after a suitable length of service should have the option of coming to a larger centre. (4) Special opportunities should be assured to talented young men wishing to do research work. (5) There should be constant interchange of scientific ideas and experience with other countries.

But another question, more important than the socialization of medicine, should be constantly hammered into the Government's mind: that socializing medicine can do little to benefit the health of a community that is harassed by unemployment, bad housing and malnutrition. But give us decent housing, economic security, work for every man and woman who wants it, an optimum diet for every man, woman and child in the community, and then a socialized medicine could raise the health of the nation to an undreamed-of level.

Yours, etc.,

E. P. DARK.

Katoomba,
New South Wales,
October 21, 1941.

Post-Graduate Work.

WEEK-END REVISION COURSE IN BRISBANE.

THE Queensland Post-Graduate Committee announces that a week-end revision course will be held at Brisbane on November 7 to 9, 1941. The programme is as follows:

Friday, November 7.

8.15 p.m.—Clinical meeting at the Brisbane Hospital.

Saturday, November 8.

9.30 a.m. to 12.30 p.m. (at the Mater Misericordiae Public Hospital).—"Plaster and Fracture Technique", by Dr. A. V. Meehan and Dr. J. R. S. Lahz.

2.30 p.m. (at the students' lecture room, Brisbane Hospital).—"The Mistreatment of Anemias", by Dr. S. F. McDonald (thirty minutes); "Minor Injuries of the Hand", by Dr. Konrad Hirschfeld (twenty-five minutes); "Defects of the Feet", by Dr. G. A. C. Douglas (thirty minutes).

8.15 p.m.—Lectures (fifteen minutes) (at the students' lecture room, Brisbane Hospital).—(1) "Sulphanilamides in General Medicine", by Dr. Alex. Murphy; (2) "Sulphanilamides in Urinary Infections", by Dr. F. W. R. Lukin; (3) "Sulphanilamides in Gonorrhoea", by Dr. V. N. B. Willis; (4) "Recent Advances in the Use of Vitamin K", by Dr. P. A. Earnshaw.

Sunday, November 9.

9.30 a.m. (at the Brisbane Hospital).—"Injection Therapy as Applied to Varicose Veins, Hemorrhoids and other Surgical Out-Patient Conditions", by Dr. Alan Lee and Dr. Malcolm Carseldine.

11.15 a.m. (at the Brisbane Hospital).—"Intravenous Medication", by Dr. Vera Madden (fifteen minutes); "Technique of Intravenous Anaesthesia", by Dr. Coates Earl; "Blood Transfusion", Dr. Felix Arden.

The Royal Australasian College of Surgeons.

MEETING OF BOARD OF CENSORS.

THE next meeting of the Australian Board of Censors of the Royal Australasian College of Surgeons will be held at the College, Spring Street, Melbourne, probably in March, 1942. Candidates who desire to present themselves at this meeting should apply to the Censor-in-Chief for permission to do so on or before December 31, 1941. The appropriate forms are available at the College, Spring Street, Melbourne, and at the offices of the various State secretaries.

The Royal Australasian College of Physicians.

EXAMINATION FOR MEMBERSHIP.

THE following candidates were successful at the examination for membership of the Royal Australasian College of Physicians and were admitted as Members on September 26, 1941:

New South Wales.—Dr. C. M. Burns and Dr. L. E. Hewitt.
Victoria: Dr. J. F. Hughes, Dr. T. Garnet Leary and Dr. Ivan M. Wartski.
South Australia: Dr. Margaret Horan and Dr. R. L. Kenihan.
Queensland: Dr. D. A. Hannaford Schafer and Dr. L. D. Walters.
New Zealand: Dr. W. E. Henley, Dr. B. O. Quin, Dr. C. P. S. Riddell.

University Intelligence.

THE UNIVERSITY OF SYDNEY.

A MEETING of the Senate of the University of Sydney was held on Monday, October 13, 1941.

The following degrees were conferred:

Master of Surgery (M.S.): Harold Bowers Gatenby, Rawdon Hamilton Kenny.

Bachelor of Medicine (M.B.) and Bachelor of Surgery (B.S.): Allan Barry Hogan (first class honours), Colin Patrick Harrison (second class honours), Morgan Francis Windsor (second class honours), Jack Francis Gillogley, Angus McNeill.

Bachelor of Medicine (M.B.): Louis Charles Anthony Ariotti.

Department of Public Administration.—During the absence on leave of Professor F. A. Bland, the work of the Department of Public Administration will be carried out by the Dean (Professor R. C. Mills), Mr. T. Kewley and Mr. I. A. Butler.

Department of Physiology.—Dr. F. S. Cotton, Reader in Physiology, has been appointed Acting Professor of Physiology during the absence of Professor H. W. Davies on full-time military service.

Dr. Colin White has been appointed Acting Lecturer in Physiology and Pharmacology.

Entrance to the Faculty of Medicine.—From March, 1943, students who desire to enter the Faculty of Medicine must, in addition to the requirements at present prescribed, pass at the "A" standard at the leaving certificate examination, or at an equivalent standard at the matriculation examination, in one at least of the four subjects required.

Obituary.

HENRY JOHN LOTZ.

WE regret to announce the death of Dr. Henry John Lotz, which occurred in October, 1941, at Perth, Western Australia.

WILLIAM EDWARD BLACKALL.

We regret to announce the death of Dr. William Edward Blackall, which occurred in October, 1941, at Cottesloe, Western Australia.

WILLIAM ERNEST GRIGOR.

We regret to announce the death of Dr. William Ernest Grigor, which occurred on October 26, 1941, at Mosman, New South Wales.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Field, Gerald, M.B., B.S., 1940 (Univ. Sydney), Sydney Hospital, Sydney.
 Carey, Harvey McKay, M.B., B.S., 1941 (Univ. Sydney), Eastern Suburbs Hospital, Bondi Junction.
 Reader, Sydney Ralph, M.B., B.S., 1940 (Univ. Sydney), Dapto.
 Hellestrand, Alan Lacey, M.B., B.S., 1941 (Univ. Sydney), St. George District Hospital, Kogarah.

Australian Medical Board Proceedings.

QUEENSLAND.

THE undermentioned have been registered, pursuant to the provisions of *The Medical Act, 1939*, of Queensland, as duly qualified medical practitioners:

Arrowsmith, Warwick, M.B., B.S., 1941 (Univ. Queensland), General Hospital, Brisbane.
 Black, Platon, M.B., B.S., 1941 (Univ. Queensland), General Hospital, Brisbane.
 Connolly, Hugh Glynn, M.B., B.S., 1941 (Univ. Queensland), General Hospital, Brisbane.
 Durbridge, Thomas Keep, M.B., B.S., 1941 (Univ. Queensland), General Hospital, Brisbane.
 Eklund, Andrew Warren, M.B., B.S., 1941 (Univ. Queensland), 50, Ferndale Street, Annerley.
 Ellis, George Henry, M.B., B.S., 1941 (Univ. Queensland), General Hospital, Brisbane.
 Forbes, Harold William Arthur, M.B., B.S., 1941 (Univ. Queensland), General Hospital, Brisbane.
 Hickey, Michael Francis, M.B., B.S., 1941 (Univ. Queensland), Maxwell Street, New Farm.
 Holmes, Charles Arthur, M.B., B.S., 1941 (Univ. Queensland), General Hospital, Brisbane.
 Hooper, Benjamin, M.B., B.S., 1941 (Univ. Queensland), General Hospital, Brisbane.
 Isles, John Howie, M.B., B.S., 1941 (Univ. Queensland), 23, Stevenson Street, Ascot.
 Lefmann, Siegfried, M.B., B.S., 1941 (Univ. Queensland), "Ardmore", Merthyr Road, New Farm.
 Mann, Claude Bertram Russell, M.B., B.S., 1941 (Univ. Queensland), General Hospital, Brisbane.
 Mansfield, Charles Harold, M.B., B.S., 1941 (Univ. Queensland), Lang Street, Dutton Park.
 Margules, Erich, M.B., B.S., 1941 (Univ. Queensland), 53, Mountford Road, New Farm.
 McCullagh, Robert Archibald, M.B., B.S., 1941 (Univ. Queensland), Gorman Street, Woolloowin.
 McSweeney, Anthony Francis, M.B., B.S., 1941 (Univ. Queensland), Mater Misericordiae Public Hospital, South Brisbane.
 Row, Richard, M.B., B.S., 1941 (Univ. Queensland), Yoku Road, Ashgrove.
 Shaw, Alixis, M.B., B.S., 1941 (Univ. Queensland), 22, Inkerman Street, Woolloongabba.
 Shellshear, Kenneth John, M.B., B.S., 1941 (Univ. Queensland), General Hospital, Brisbane.
 Walsh, Patrick Redmond, M.B., B.S., 1941 (Univ. Queensland), 74, Granville Street, West End.
 Willmer, Neville Beaumont, M.B., B.S., 1941 (Univ. Queensland), General Hospital, Brisbane.
 Woodburn, John William, M.B., B.S., 1941 (Univ. Queensland), General Hospital, Brisbane.
 Gild, David, M.B., B.S., 1938 (Univ. Adelaide), Emerald.
 The undermentioned change of name has been registered:
 Reid (*nee Hill*), Nettie Grace, M.B., B.S., 1930 (Univ. Melbourne), General Hospital, Maryborough.

Books Received.

"Berkeley Moynihan, Surgeon", by Donald Bateman; 1941. London: MacMillan and Company, Limited; Sydney: Angus and Robertson, Limited. Medium 8vo, pp. 378, with illustrations. Price: 16s. net.

"The Second Yearbook of Research and Statistical Methodology: Books and Reviews", edited by Oscar K. Buros; 1941. Highland Park: The Gryphon Press. Imperial 8vo, pp. 403. Price: \$5.00 net.

Diary for the Month.

Nov. 5.—Western Australian Branch, B.M.A.: Council.
 Nov. 5.—Victorian Branch, B.M.A.: Branch.
 Nov. 6.—South Australian Branch, B.M.A.: Council.
 Nov. 7.—Queensland Branch, B.M.A.: Branch.
 Nov. 11.—Tasmanian Branch, B.M.A.: Branch.
 Nov. 14.—Queensland Branch, B.M.A.: Council.
 Nov. 19.—Western Australian Branch, B.M.A.: Branch.
 Nov. 19.—Victorian Branch, B.M.A.: Council.
 Nov. 27.—New South Wales Branch, B.M.A.: Branch.
 Nov. 27.—South Australian Branch, B.M.A.: Branch.
 Nov. 28.—Queensland Branch, B.M.A.: Council.
 Nov. 28.—Tasmanian Branch, B.M.A.: Council.
 Nov. 28.—Tasmanian Branch, B.M.A.: Council.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135, Macquarie Street, Sydney): Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phoenix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federated Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178, North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205, Saint George's Terrace, Perth): Wiluna Hospital; all Contract Practice appointments in Western Australia.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

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